The OIL AND GAS JOURNAL

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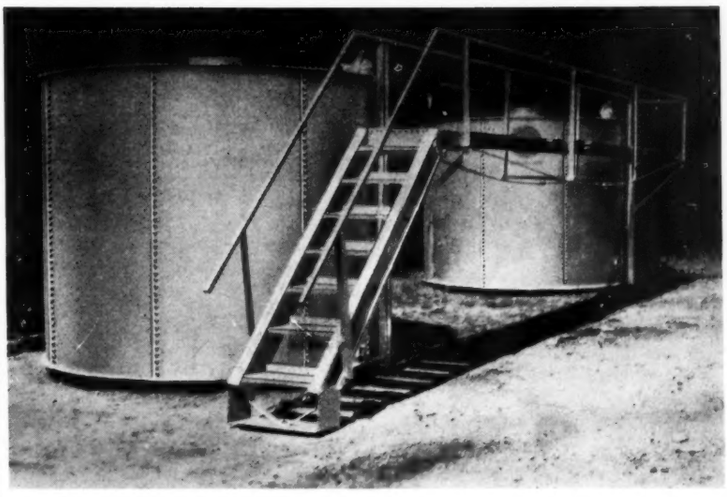

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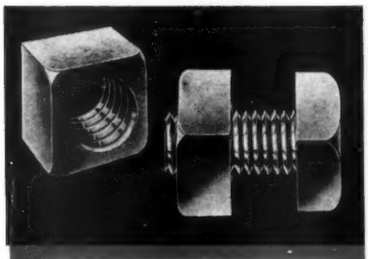

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POUNDS TENSILE STRENGTH

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OF STAIRWAY AND WALKWAY

SPRAY PAINTING SEALS PORES
AGAINST CORROSIVE ACTION

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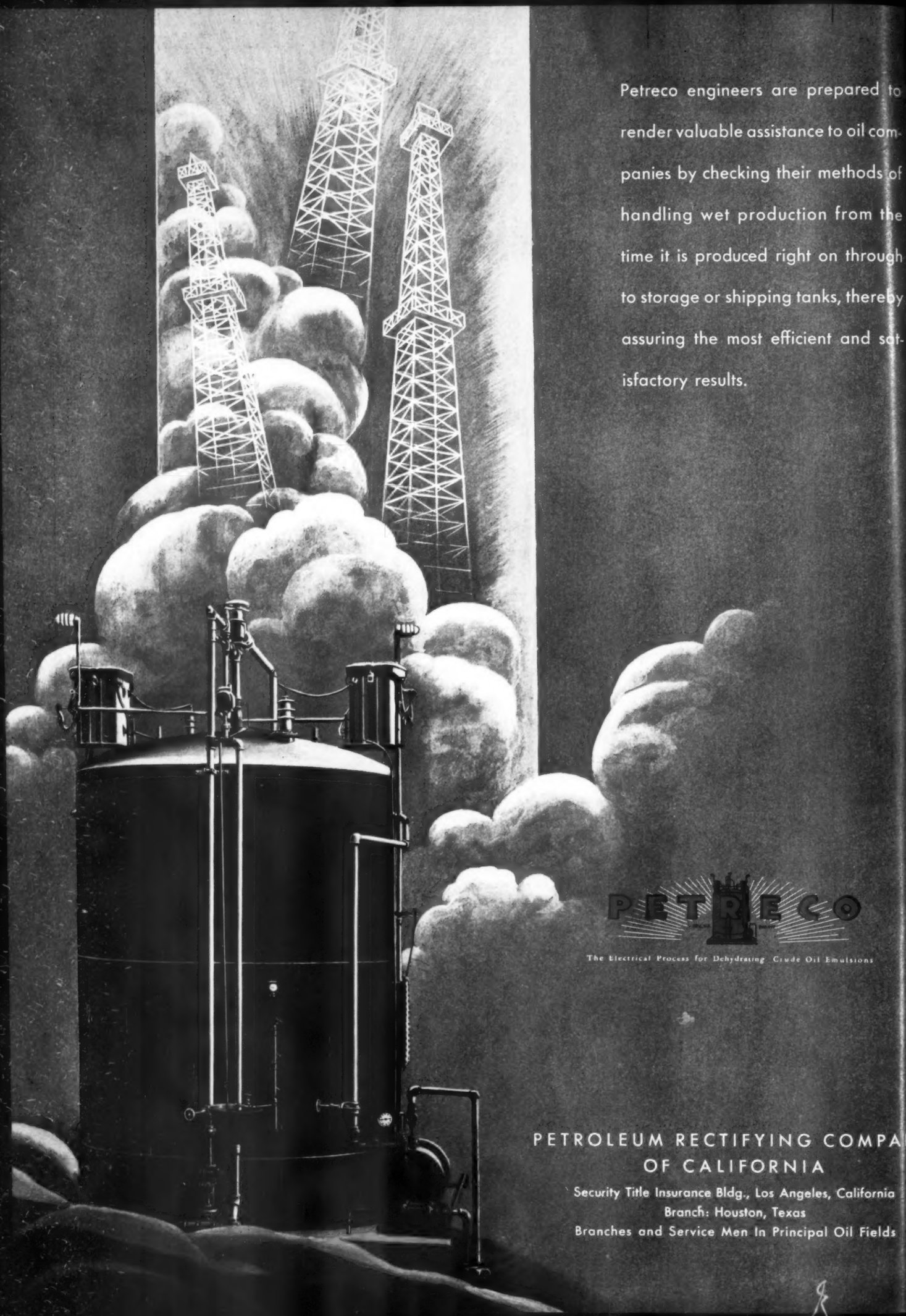

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THE OIL AND GAS JOURNAL

Volume 33
Number 31

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OIL MAN'S CALENDAR

January

7—New York, Society of Automotive Engineers, annual dinner.

8-10—Milwaukee, Wis., annual convention and Equipment Show of Wisconsin Petroleum Association, Parkinson Hotel.

14-18—Detroit, Mich., Society of Automotive Engineers, annual meeting, Book Cadillac Hotel.

17-18—Minneapolis, Minn., Northwest Petroleum Association, Minnesota division, West Hotel.

February

7-8—Louisville, Ky., Kentucky Petroleum Marketers Association.

12-14—Columbus, Ohio, Ohio Petroleum Marketers Association, annual dinner, Deshler-Wallick Hotel.

18-21—New York, Petroleum Division, A.I.M.E. (A.I.M.E. annual meeting).

March

21-23—Wichita, Kans., American Association of Petroleum Geologists, annual meeting.

April

8-13—Houston, Tex., Oil Equipment and Engineering Exposition.

11-13—Dallas, Tex., Petroleum Industry Electrical Association, Baker Hotel.

22—New York, American Chemical Society, semiannual meeting.

(?)—Wichita, Kans., Kansas Oil Men's Association.

June

20-21—State College, Pa., Pennsylvania Grade Crude Oil Association, annual meeting.

24-28—Detroit, Mich., American Society for Testing Materials, annual meeting, Book Cadillac Hotel.

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Field Development Work Increasing as Crude Oil Production Allowables Get Substantial Raise

By ANDREW M. ROWLEY

SUBSTANTIAL increases in crude oil production allowables for the different states for the remainder of December and all of January have been announced by the Petroleum Administrative Board. While the increase totals 153,300 barrels daily, the daily average output last week was 125,000 barrels above the previous allowable for December, so production, if kept within allowables, cannot be increased much over present figures. In other words, production for the country as a whole consistently has been above allowables set by the Federal government so the increases permitted merely create a better balance between the Administration's figures and actual production.

Greater demands for crude oil by refiners who desire to build up gasoline stocks is given as the reason for the higher crude oil production allowables. It is rather unusual to increase crude production allowables in the middle of a month, hence the action of the Petroleum Administration this week emphasizes the fact previous allowables have been out of line with actual conditions and also that consumption has been maintained at a higher rate than had been expected.

No other industry in the United States has enjoyed so large a part of its peak market as has the oil business. The greater need for crude oil and the effort to increase the quantity of gasoline in storage is but a natural result of the enormous domestic consumption of gasoline which during the first 10 months of this year was within 1.4 per cent of the consumption during the similar period of the record year for all time—1931. It is to the great discredit of management on the industry that such conditions are not reflected in better prices.

Increased activity in many fields, despite the approach of winter, is the best evidence that the producing branch of the business realizes fully the improved condition in this division of the industry. West Texas and western Kansas, long regarded as especially promising areas for development are beginning to get a good play, with results achieved already which will insure still greater activity. For example, a county in West Texas in which no oil operations have been conducted for several years, is the scene of new wildcat explorations.

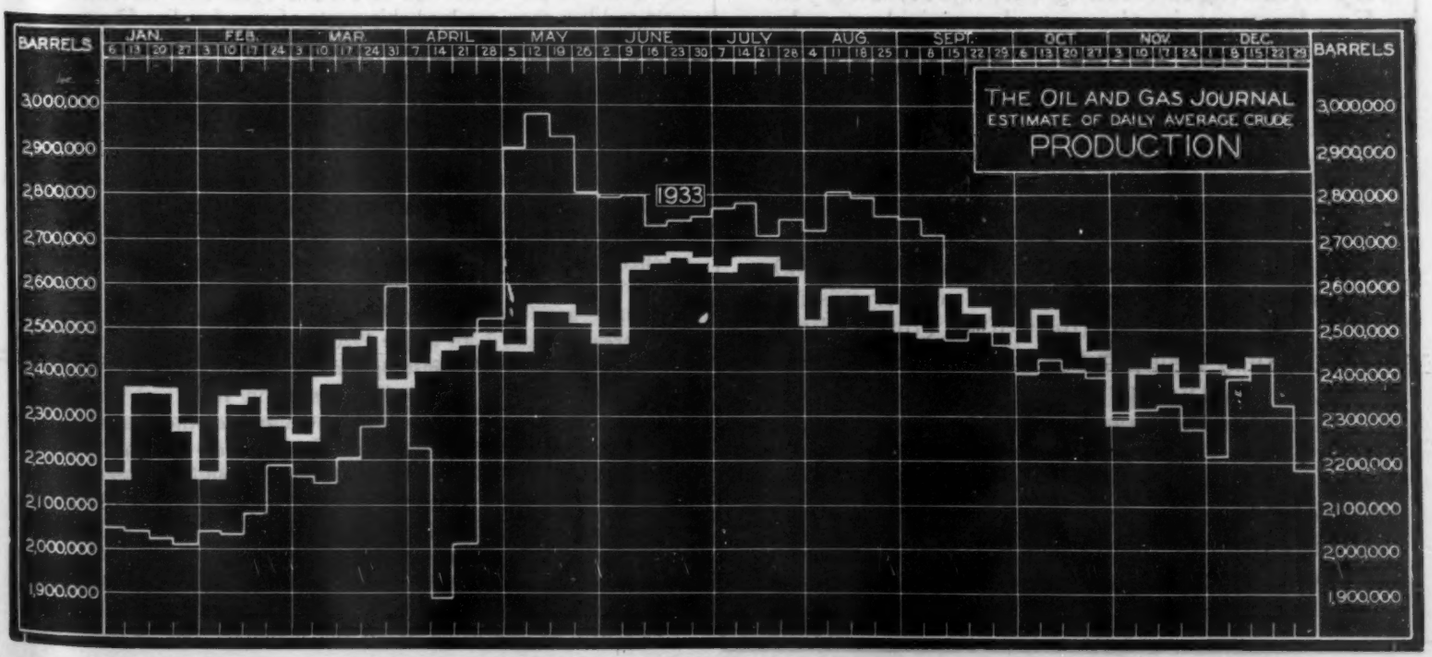
If and when the marketing branch of the business gets its house in order and sales managers are instructed by executives that the companies are in business to make reasonable profits and not merely to establish new gallonage records, a real and substantial improvement will be shown by every branch of the industry. Heads of companies might do well to give more attention to this matter of gallonage or profits.

Crude Oil Production in the United States

Estimated daily average production for the week ending December 15, a comparison with previous week and the Federal allowables follow:

		Federal allowable	
Oklahoma—	Dec. 15	December	Dec. 8
Oklahoma City	165,425	.....	157,550
Seminole-St. Louis	89,650	.....	70,225
Remainder of State	231,975	.....	227,025
Total Oklahoma	487,050	451,600	454,800
East Texas—			
Lathrop	145,823	.....	149,762
Kilgore	137,654	.....	147,728
Joiner	127,786	.....	132,454
Total East Texas	411,263	.....	429,944
West Texas	130,984	.....	130,764
North Central Texas	89,447	.....	90,237
Texas Panhandle	58,127	.....	52,524
East Central Texas	46,914	.....	44,544
Gulf Coast—Texas	165,306	.....	164,768
Southwest Texas	55,082	.....	54,826
Total State of Texas	957,123	941,300	967,607
Kansas	126,975	123,900	122,150
North Louisiana	23,670	.....	23,810
Gulf Coast—Louisiana	83,012	.....	85,087
Total Louisiana	106,682	94,000	108,897
Arkansas	31,075	29,000	31,095
Eastern Fields (except Michigan)	103,000	93,000	105,000
Michigan	28,317	27,900	27,447
Rocky Mountain area	96,230	89,500	96,350
California—			
Santa Fe Springs	39,100	.....	38,900
Long Beach	65,750	.....	64,000
Mountain View	11,600	.....	12,700
Elwood	9,500	.....	8,800
Kettleman Hills	58,000	.....	59,000
Remainder of State	311,800	.....	309,100
Total California	495,750	456,800	492,500
Total United States	2,432,202	2,307,000	2,405,846

Increase 26,356 Bbls. Daily.



WITH an annual pay roll to its employes of $2,043,000,000; with purchases contemplated from other industries in 1935 of $1,312,000,000; with an annual tax contribution to government of $1,004,824,000; with a distribution of wealth and patronage far greater than any other business activity in the world's history, with the single exception of agriculture, the importance of the petroleum industry in the national scheme, especially in relation to the national recovery program, cannot be overemphasized. On the contrary, it seems to have been underestimated; to have been taken for granted; to have been given the customary small measure of appreciation accorded the breadwinner.

The great buying power generated in the pursuit of oil and gas and in its consequent manufacture and distribution gives strength to our economic fabric. Of far greater importance is the fact this buying power, this market for the country's goods, witnessed no great curtailment during the past three or four critical years.

The petroleum industry is the most heavily taxed of any business in the country, taxes paid during 1933 totaling $1,004,824,000, which amounted to $1.11 on every barrel of crude oil, although the average price of crude oil during 1933 was only 67 cents a barrel.

Farmers benefit from the petroleum industry to the extent of $201,845,000 a year paid them in cash for leases, rentals and royalties, this sum being in addition to other expenditures of the petroleum industry which total $1,312,000,000 a year.

It is estimated there are about 1,250,000 employes on payrolls of the petroleum industry with wages totaling $2,043,000,000 a year. Employment in the petroleum industry has been sustained at a high level during the business depression and was increased under the code by approximately 300,000 persons.

Yet this giant of all business has so conducted its operations that despite hundreds of millions of dollars spent in new equipment and methods to improve its chief product—gasoline—this product, a necessity to 25,000,000 automobile owners in this country, is and always has been, cheapest of all commodities.

The only group in the whole country which has not benefited proportionately by this vast business are the stockholders of the petroleum companies. Average net earnings during the past 13 years have been only 1.66 per cent on the total investment in the business. Total net earnings of the whole industry for 13 years are only twice as much as the industry's taxes for one year—1933.

Petroleum in National

The petroleum industry, lightly regarded by the public whose only contact with it is at the filling station, needs to be set forth in its real dimensions before it becomes the football of politics in Congress.

Emerging from the depression in which it was doubly handicapped by general conditions and its own overproduction, with crude selling for 25 cents a barrel and gasoline in many cases being given away, the oil industry has been the outstanding leader in recovery.

More than any other it has maintained its volume of business nearest peak consumption throughout the depression. Today it is definitely aiming for new peaks. This sustained and again increasing business has enabled it to maintain employment at a higher level than any other manufacturing industry during the troublous years we have just passed through. The increase in field operations and constant search for improvements in manufacturing operations is steadily enlarging the oil industry's demand for equipment and supplies and widening its stimulus to general recovery in other industries and lines of business.

The steadiness of the petroleum industry during the past five years is strikingly shown in the records of railroad freight revenue during that period.

The movement of refined petroleum products by rail declined only 27 per cent between 1929 and 1932 and some of that was due to the construction of gasoline pipe lines so that otherwise the decline would have been still less.

Contrast that with a decline of 40 per cent on bituminous coal railroad freight revenues; of over 90 per cent on iron ore shipments; of 70 per cent on copper ore and other concentrates.

Records of Railroad Freight Revenues Measure Importance of Petroleum

Railroad freight revenue from all products of mines fell 50 per cent; lumber products 71 per cent; products of manufactures 65 per cent and less than car load shipments of merchandise 57 per cent.

Between 1929 and 1931 the pipe lines increased their mileage by 7,294 miles with an additional investment of $104,000,000.

The consumption of cotton dropped 30 per cent from 1929 to 1932, the production of tires was 42 per cent and the consumption of tobacco was 15 per cent less than in 1929.

Oil and gas wells operatives reported by the census of 1920 as numbering 85,550 had increased to 105,224 in 1930.

An exceptionally notable increase in employment was the increase in chemical employes in petroleum refineries from 8,891 in 1920 to 25,274 in 1930.

Just as a sidelight on employment through oil, oilers of machinery increased from 7,369 in the 1920 census to 13,704 in that of 1930.

While the domestic consumption of gasoline in 1932 declined only 7.59 per cent from its peak, established in 1931, and last year increased 1.28 per cent over that minimum and for the first ten months of this year was only 1.4 per cent below the all time high, the production of finished rolled steel products dropped 74 per cent between 1929 and 1932; the production of new copper declined 75 per cent; and the production of coal 40 per cent.

An analysis of governmental statistics reveals its startling proportions and the immensity of its contribution to the development of the country.

One-fifth of the value of all the manufactured products of the

Industry Most Potent Factor Business Recovery Program

United States owes its origin to the oil industry. Without the oil industry there would have been no market for it.

This was manufacturers' value, to which must be added wholesale and retail profits, including transportation and distribution costs and all the other incidentals that combine to make business, affecting the entire life of the country proportionately.

No other line of basic activity, except agriculture, plays so large a part in modern American business. No other mineral extracted from the earth adds so much to the national wealth as oil.

Since the beginning of the industry the oil produced had a value at the wells of more than $20,000,000,000. For several years the annual production of crude oil exceeded $1,000,000,000 annually. The combined value of oil, natural gas and natural gasoline produced is well over that sum. No other industrial mineral (coal excepted) approaches half that total.

The largest manufacturing industry in the country, automotive, would not have been developed without oil. That industry takes one-fifth of the naion's steel output.

The oil and gas industry itself is one of the chief customers of the steel industry, in normal times consuming between 8 and 10 per cent of its product.

The oil field equipment and refinery equipment manufacturers constitute a great manufacturing industry by themselves. The chemical and lumber industries count the oil industry among their most important customers.

The building and construction industries would be amazed if they could sum up the business they have obtained from the marketing division of the oil industry with its 170,000 service stations, representing an investment of approximately one billion dollars.

The lighting bill alone for these brilliantly illuminated spots on the streets and highways must run close to $25,000,000 a year.

Offspring of Oil

Then there is the rubber industry, which developed its immense tire business only because of the gasoline propelled transportation. More than half the wage earners in the rubber industry and more than half its output are due to tire production.

In fact the automobile industry consumes 73 per cent of the rubber output, 40 per cent of the plate glass, 14 per cent of the lumber, 54 per cent of the leather, 23.5 per cent of the aluminum, 15.4 per cent of the copper, 11 per cent of the tin, 35.5 per cent of the lead, 7 per cent of the zinc, 24 per cent of the nickel, 22 per cent of the mohair, and 7 per cent of the cotton manuafctured in the United States.

Carbon black is a product of natural gas, an integral branch of the petroleum industry. Which recalls the strange fact that the oil industry not alone furnishes the propelling power for our highway transportation but supplies a vital constituent for the tires upon which that traffic moves as well as the asphalt and road oil employed to build those highways.

And, of course, we might go further and add that the taxes paid upon gasoline (when not diverted to other purposes) have paid for the construction and maintenance of those very roads over which the oil industry has furnished the power of movement.

The agitation in the rural regions for good roads would have continued to have been like a voice crying in the wilderness if the gasoline car had not come along and interested everybody in better highways and supplied the money to construct them.

The billion a year spent on highway construction and maintenance is another factor in our industrial and business life that is owed to the oil industry.

Speaking of transportation, the oil and natural gas pipe lines represent an investment of approximately $3,000,000,000, another contribution to the national wealth by the petroleum industry.

Petroleum ranks first among rail shipments of manufactured products. More than 150,000 tank cars are used in petroleum service.

Tankers represent more than 17 per cent of the total tonnage of American steam and motor vessels engaged in merchant transportation, and more than 10 per cent of the world's total tonnage.

Staggering as are the figures reflecting the material place of the oil industry in America's industry and commerce they are but part of the story.

Progress is but another name for movement. Nothing man has discovered has so accelerated movement as oil. If you question it, compare the rate of progress across the seas with the speed attained in America.

Back in the "gay nineties" the Old World boasted its superiority industrially and commercially. America was just getting into its

Pays Farmers $200,000,000 a Year

Farmers in the United States, both in oil producing and non-oil producing states, are paid approximately $200,000,000 every year by the petroleum industry for rentals, bonuses on leases and royalties. This business is the only one in the country giving such steady, substantial cash support to agricultural interests. Other interests benefit materially from this cash outlay on the part of the petroleum industry. Thousands of mortgages are paid with this money supplied by oil and natural gas companies; and taxes, long unpaid, are settled in full, with the states and counties benefitting as a result.

When oil or gas companies lease land from farmers, a bonus usually is paid for the lease. In some cases this runs as high as $300 or more per acre, although the average in Texas is probably about $3 an acre and in Oklahoma and Kansas close to $6 an acre. It is found desirable that mortgages and taxes be paid on property to be leased and the farmers take the money advanced to settle these debts. Land leased brings rentals to the farmer at the rate of $1 an acre per year in areas where there is field activity and anywhere from 10 to 25 cents an acre for large blocks in states where development may take place.

While royalty interests, calling usually for one-eighth of the oil or gas produced, often pass to individuals not engaged in farming, the farmer or owner of the land has been paid a substantial sum for this interest as he retained the one-eighth interest in all production developed on the property he owns and leases.

The extent to which farmers participate in these rentals and bonuses from the petroleum industry may be visualized by the fact 21 oil companies hold and pay rentals on 4,000,000 acres of undeveloped prospective oil land in Oklahoma and on 4,500,000 acres in Kansas, and it is estimated there are 2,500 operating oil companies and individuals in Oklahoma and 800 in Kansas. Rentals on these holdings are approximately $1 per acre per year.

America's Progress Accelerated by Oil Industry

stride. No doubt our natural advantages and enterprise must have carried us ahead, but we were still tied to earth like our competitors through dependence upon transportation by foot, horse or rail, very much as they are today.

But with the development of the motor car and the truck, thanks to gasoline, the whole nation was set upon wheels. The effect was like the introduction of the conveyor belt in a mass production factory. We were immeasurably speeded up, far beyond the pace of any competitor.

Production and commercial activities that took weeks or months abroad became possible within days in America. The daily radius of 15 miles was expanded to a hundred or more, and individual and commercial business correspondingly.

The place which gasoline propelled transportation has acquired in American life was strikingly shown during the late depression, when gasoline consumption, alone among manufactured products, maintained 85 per cent of its peak at the lowest point, and is now beating back.

The car, once deemed a luxury, has become such a necessity that it was indispensable even for the unemployed who was thus able to widen his search for employment.

In this country the development of automotive transportation began with the pleasure car and then extended to trucks and buses. Abroad it is the other way around. The gasoline propelled mode of transportation is being utilized most effectively for trucking and buses while the individual car is restricted to the fortunate few.

The difference between a car to every five persons in this country and one to every 30 in the most advanced European countries reflects the handicap abroad upon popular movement, and the consequential effect in slowing industry and commerce.

Remarkable Expansion

Side by side with the development of motor transportation the past decade has seen a remarkable expansion of the use of oil for heating. The number of oil burners passed the 100,000 mark first in 1924 and is now approximately 800,000.

The manufacture of oil burners has become an important industry believed to be only on the verge of its evolution. Stabilization of the oil situation, reassuring the prospective buyers about a continued supply at a steady price, would give it an immense stimulus. The convenience and advantage of oil heating would give it a preferential price. With co-operation between the oil industry and the burner manufacturer and the perfection of burners and fuel, oil heating may become as popular and indispensable as gasoline transportation.

How many of the buyers of gasoline realize that the industry makes and sells almost as much gas and fuel oil as gasoline? Gasoline is sold by retail where everyone can see it, but gas and fuel oil are sold by wholesale at points removed from general contact.

The railroads under normal conditions used between 50,000,000 and 79,000,000 bbls, steamships and oil-burning vessels over 90,000,000, gas and electric power plants 30,000,000 bbls., and the iron and steel industries 20,000,000.

One of the most remarkable changes wrought by oil was in the marine field. The eclipse of the sailing ship by the steam vessel was not much more striking and certainly much slower than the eclipse of the coal burning vessels by those using oil.

The tonnage of oil burning ships increased from 4 per cent of the world's tonnage before the war to over 40 per cent today, while half the ships launched are now driven by internal combustion engines. The demand for bunker oil and Diesel oil is one-fourth of the industry's gas and fuel oil markets.

The most widely spread use of oil is probably as a lubricant. Our present mechanized civilization would have been impossible without petroleum for lubrication. The fats and vegetable oils our grandfathers had to depend upon as lubricants would have limited the speed of machinery for lack of proper lubrication.

It took the specialized evolution of lubricating oil from petroleum suitable for the varied requirements and uses of complicated high-speed, modern machinery to make that machinery possible.

"A drop of oil" not only keeps the path smooth but permits enormously accelerated travel over it.

Millions to Electric Power Companies

Comparatively few people seem to realize how good a customer the petroleum industry is of electric power companies. Expenditures during this year for power for pipe line stations, drilling operations, refineries and filling stations is estimated at $38,968,000. This does not include lights for offices or power generated by the companies themselves. With an increase in operations expected during 1935 it is felt, conservatively, expenditures for electric power by the petroleum industry will be increased 10 per cent over 1934. The extent of electric power purchased by the petroleum industry is shown by the fact pipe line companies operating in the territory from the Texas Gulf Coast to Chicago paid electric power companies in that area $10,000,000 for current this year. Refineries in this same area expended an additional $2,000,000 for electric power.

Construction Program in 1935 Calls for Huge Expenditures

During 1935 the production and pipe line branches of the petroleum industry will expend more than $500,000,000 for drilling wells and reconditioning and replacement in existing pipe line systems. This figure does not include any operating expense or salaries or overhead of companies doing the work. It represents only the cost of equipment and machinery and labor involved in the work. It does not include cost of leases in drilling operations.

Many other industries will benefit from this expenditure which involves steel derricks, pipe, engines, concrete and other well equipment in addition to trucking and railroad transportation of materials. Pipe manufacturers, welding firms, coating manufacturers and ditching contractors will benefit from the pipe line work.

The industry spent $137,826,700 more for drilling wells in 1934 than it did in 1933, the low figure for 1933 being due to the decrease in field operations because of overproduction of crude oil. The drop in operations was not due to the business depression but to excess quantities of crude oil available. With producing companies becoming more concerned about their future reserves of crude oil and the steady withdrawal of crude from storage and the consumption of approximately 540,000,000 bbls. of crude oil each year more than is being discovered, drilling operations during 1935 are expected to show a further increase, with a resulting greater expenditure on the part of the industry for material, equipment and labor.

Figures made available to The Oil and Gas Journal by a number of companies showing actual expenditures in recent years and amounts set up in budgets for expenditures in 1935 show a substantial increase in expenditures in all branches of the industry is contemplated during 1935. In this connection all figures given this publication show a material increase in amounts being paid in the form of wages.

For example, one integrated company spent $14,900,000 for wages in its production, refining and pipe line departments in 1932, $15,900,000 in 1933, $19,000,000 in 1934, and estimates its expenditures for wages in 1935 will be $20,400,000.

Increases in capital expenditures in 1935 for the different branches

Nothing Left for Provider

—Drawn exclusively for The Oil and Gas Journal

Increased Expenditures During Coming Year for

Petroleum Industry Taxes in 1933

The average barrel of crude oil, traveling from the well to the consumer, attracts approximately 118 taxes. There is not room to list them separately, but this 1933 petroleum tax bill, which is typical, shows amounts paid, totaling over one billion dollars:

	Total tax cost	Tax per barrel
State gasoline taxes	$ 518,195,712	$ .5726
Federal gasoline taxes	181,125,988	.20
Real and personal property taxes	130,000,000	.1439
Income taxes (Federal, state, and city)	50,000,000	.0552
Severance taxes (state, county, and municipal)	22,625,000	.025
Federal lubricating oil taxes	22,289,624	.0246
Federal pipe line transportation taxes	10,237,274	.0113
Municipal gasoline taxes	10,000,000	.011
State registration and licenses fees on tank trucks, etc.	10,000,000	.011
Capital stock tax	9,955,000	.0109
Federal and state excise taxes on tank trucks and other vehicles	7,952,380	.009
Federal taxes on new tires for old tank trucks, etc.	4,132,660	.0046
Corporation franchise, stock, and mercantile licensing and inspection taxes	3,620,000	004
State inspection fees, drilling permit fees, etc.	3,620,000	.004
Federal taxes on parts and accessories for tank trucks	633,120	.307
State sales taxes on tires for tank trucks, etc.	437,270	.0005
Other taxes	20,000,000	.0221
Grand tax total	$1,004,824,028	$1.1101

of the industry are shown by figures made available. One company, which spent $5,600,000 for production in 1933, will spend $8,000,000 in 1935. The same company spent $13,200,000 in its refinery operations in 1933 and will spend $17,000,000 in 1935 in this department of its business. Its pipe line division spent $2,200,000 in 1933 and in 1935 will spend $4,000,000.

These figures indicate conclusively the petroleum industry not only has maintained a high rate of employment throughout the business depression at better than average wages but has very substantially increased the number of persons employed at a consequent increase in sums paid out in the form of wages.

Estimates made from the best figures obtainable indicate the petroleum industry has added approximately 300,000 persons to its pay rolls since adoption of the code for the industry and that the average wage paid to all persons is $1,634.40 per year.

Pipe Line Expenditures

Expenditures by the pipe line branch of the industry during 1935 are expected to exceed greatly the amount paid out during this year and in each of the past three years. Each year of service naturally makes necessary more reconditioning of the average pipe line and the percentage of replacement increases with the age of the line. In addition a number of oil pipe line companies are modernizing their systems by replacing 6 and 8-inch lines with 10-inch welded lines, operating costs per quantity of crude transported being much lower for the larger size lines.

Replacements and reconditioning work for oil and natural gas pipe lines in the country are estimated to cost approximately $116,000,000 during 1935. This figure does not include any estimate of costs for entirely new lines which may be constructed if field developments and conditions warrant. Many extensions are necessary to existing natural gas lines and it is entirely probable a number of important extensions to natural gas lines will be constructed next year. With the increase in drilling operations in the oil industry and promising developments in areas with very limited pipe line facilities, such as western Kansas, there is every reason to believe there will be an increase in construction work in oil pipe lines next year also.

The petroleum industry is one of the largest users of automobiles and trucks in general business. Pipe line and production companies utilize thousands of large trucks for transportation of material and equipment and in other operations so the expected increase in operations of these branches of the business during 1935 naturally will result in greater expenditures for trucks, tires and other automotive equipment.

Numerous other industries also will be benefited by increased operations in the petroleum industry. Every pipe line company constructs and operates its own telegraph system so extension of pipe lines means construction of more telegraph lines and the use of more copper wire. The building trades are affected by construction of pipe line stations and company communities in producing areas.

Expenditures by Refining and Natural Gasoline Industries

As its contribution to aid national recovery the refining branch of the oil industry stands ready to spend in excess of $1,500,000,000 in 1935, one-half of which amount will go into equipment, manufactured supplies, labor and taxes, the other-half to be distributed among hundreds of thousands of oil producers, landowners, and royalty holders living in every state of the union.

These equipment purchases will be broad enough to help fill the pockets of employes in every major industry and the item of heavy equipment alone will exceed $170,000,000.

The 483 operating refineries will pay out in wages approximately $130,000,000 and the ad valorem taxes paid on these plants alone will provide a sure $90,000,000 to the coffers of municipalities in more than half of the states in the country. To this must be added the direct manufacturers tax which will net the federal Government approximately $168,000,000 in 1935. This item does not include any portion of the gasoline and lubricating oil taxes to be paid on its products sold through its own stations.

In 1935 refiners will also provide business for the chemical industry aggregating $100,000,000. Its chemical purchases will probably reach a new high. The production of chemicals and the development of that industry in time of peace not only adds to the wealth of the nation but encourages the building of a most effective national defense.

Natural Gasoline

The refining companies of the United States absorb practically all of the output of natural gasoline plants and in 1935 will pay to this allied industry about $75,000,000 for the latter's products. This in turn will provide employment for about 25,000 men and will pay

Petroleum Investments and Earnings

Year	Estimated investment	Petroleum industry net earnings	Percent earned on investment
1921	$ 6,550,000,000	$ —1,841,457	—0.03
1922	7,877,375,000	221,615,211	2.81
1923	8,000,000,000	76,355,904	0.95
1924	9,150,871,000	227,938,411	2.49
1925	9,500,000,000	471,106,534	4.96
1926	10,000,000,000	475,393,629	4.75
1927	10,500,000,000	104,324,161	0.99
1928	11,000,000,000	386,516,430	3.51
1929	11,500,000,000	456,495,196	4.54
1930	12,000,000,000	92,439,088	1.38
1931	12,100,000,000	—333,903,133	—2.76
1932	12,200,000,000	—182,400,000	—1.50
1933	12,000,000,000	204,000,000	1.70
Averages and totals 13 yrs.	$10,221,403,538	$2,198,089,974	1.66

Production, Refinery and Pipe Line Requirements

for the $10,000,000 to $20,000,000 worth of new equipment natural gasoline manufacturers will buy during the year for the economic operation of their existing plants and for new plants. A large share of this sum will go into the heavy industries.

To the above purchases should be added those which natural gasoline manufacturers will make from hundreds of thousands of producers of gas in the form of raw material. These 1,000 plants are scattered throughout 16 states and account for many millions of dollars spent in small, rural community stores and supply houses which do not enjoy segregated purchasing power and which have suffered greatly from the smaller buying power of farmers and others in these same communities.

Another item of major importance in the list of refinery purchases is that of electrical energy. Next year this will approximate $7,000,000. It does not represent the quantity of power consumed by refiners nor does it include the purchase of power for the lighting and operating of filling stations as many refineries are equipped to manufacture their own power and that consumed by the marketing branch of the oil business is included in a summary of marketing expenditures to be discussed later.

If a total is struck at this point, the expenditures of refineries exclusive of the cost of crude oil, a figure of $741,600,000 is shown. If to this is added the cost of crude oil, and assuming producers will continue to supply oil at only $1 a barrel, the total expenditures by refiners will be swelled by $840,000,000, or to a grand total of $1,581,600,000.

Equipment Items

The $170,000,000 refiners will spend in 1935 for equipment will be consumed through the purchase of approximately $66,000,000 worth of heavy fabricated material and machinery for use in new plants or for the expansion of existing units, $42,000,000 for the maintenance and repair of present plants, $18,800,000 for cans and containers, $25,000,000 for refinery owned marine facilities, $3,000,000 for tank cars and parts, $2,000,000 for cement and approximately $15,000,000 for miscellaneous items that will come to the plants in the form of wooden barrels, paper, stamps, paint, rubber goods, leather articles, insulating materials, etc.

While all items are necessarily estimated and based on current conditions it should also be mentioned that in some cases the figures reflect less than normal purchases. An example is afforded in the item of marine expenditures set out above as $25,000,000. At the present time there is an excess supply of tankers and many are idle. There is no immediate incentive to build except to modernize and keep repaired the equipment now available. The investment in American-owned tankers amounts to more than $400,000,000. and obviously a reasonable replacement and repair bill would call for an expenditure of at least $25,000,000 as shown above. Should a resumption of a normal world trade be effected, the amount to be spent for marine facilities would mount to several times the estimated figure.

Also, if refiners are able to improve the market prices for their products and thus increase their income for next year, it seems only reasonable that they could be expected to increase their general purchases of new equipment above the amount shown here.

Selective Solvent Plants

An important factor in the purchase of new equipment next year will be the expansion of solvent refining. In the past year approximately $8,000,000 worth of special equipment was added and from $10,000,000 to $20,000,000 could easily go into new selective solvent units in 1935. The added attention given to the manufacture of motor oils has also prompted refiners to pay more attention to the manner in which these oils are marketed. This in turn has allowed sealed containers to gain a strong foothold and now the total of these sales probably account for 15 per cent of the total motor oil dispensed through filling stations.

Cost of Drilling Wells in 1934

	Completed	Average cost per well	Total cost
Pennsylvania Grade fields	2,603	$8,000	$20,824,000
Central Ohio	686	12,700	8,712,200
Lima, Ohio	120	3,500	420,000
Indiana	189	5,000	945,000
Kentucky	380	2,000	760,000
Illinois	18	5,000	90,000
Michigan	440	22,000	9,680,000
Mississippi	31	20,000	620,000
Kansas	829	30,000	24,870,000
Oklahoma	1,687	31,500	53,140,500
North Central Texas	2,149	8,100	17,406,900
West Texas	558	30,200	16,986,000
East Central and East Texas	3,650	15,000	54,753,000
Texas Panhandle	447	38,000	16,851,000
Gulf Coast Texas	1,256	30,000	37,680 000
Southwest Texas	1,236	12,500	15,450,000
North Louisiana	401	25,000	10,025.000
Gulf Coast Louisiana	367	45,000	16,515.000
Arkansas	85	15,000	1,275,000
Montana	185	14,000	2,590,000
Wyoming	64	32,000	2,048,000
Colorado	23	39,000	897,000
New Mexico	139	60,000	8,340,000
California	563	68,000	38,284,000
Scattering	7	40,000	280,000
Total 1934	18,113	$19,845	$359,442,600
Total 1933	12,312	18,000	221,616,000
Increase	5,801	1,845	$137,826,700

After reviewing these formidable figures as estimated expenditures refiners will make in 1935, it is only natural that one asks "Where will the money come from?"

To pay all these bills, refiners will need to take in at least the $1,581,600,000 they will spend. However, it would be well to mention that refiners in general have the habit of spending about all they take in. The desire to modernize and improve is an inherent characteristic of the business. If that may be called a fault the industry truly lives from hand to mouth. With this a fact, it is necessary only to turn to the report of the federal Government as part of its census of industry for 1933 and see there that the total refinery revenue from the sale of its products at its plants amounted to $1,360,521,559. In 1931, and taking the Government's figures again, the income was $1,508,037,557 and going back just two years beyond that period, the income in 1929 was $2,639,665,000, or double that of a year ago.

Marketing

In addition to this $1,581,600,000 to be spent by refineries in 1935 the marketing branch of the oil business will spend another $60,000,000 for electricity, tanks, pumps, real estate, water and construction, to which should be added approximately $290,000,000 as wages to men working in refinery control outlets and as the income of proprietors operating privately owned stations.

To get this quantity of oil to market, refiners and marketers will also pay approximately $320,000,000 in freight to the railroads of this country. This represents approximately 11 per cent of their entire income for handling the car-lot shipments of all commodities.

Investigating the marketing of refined products a little further, we see benefits from oil going to countless individuals as real estate owners, mechanics and construction artisans. There is a distinct trend toward removing the old cheap filling station and its replacement with a costly permanent unit. Already approximately $1,120,000,000 stands on the books of refining and marketing companies as the investment they have made in stations and bulk plants, and these facilities now supply employment for approximately 500,000 people.

California Tide Water Sites Make Plural Drilling Method Desirable

By L. P. STOCKMAN

LOS ANGELES, Cal., Dec. 17.—The Barnsdall and Rio Grande Oil companies, co-discoverers of the Elwood Field of Santa Barbara County, have perfected and are using to good advantage a multiple type of drilling which is especially adaptable to tideland development because it greatly reduces drilling costs by eliminating the necessity of constructing costly well foundations and other surface equipment by utilizing a common rig and primary hole for the drilling of two or more wells. In the development of tideland property in the Elwood Field, these operators early recognized the necessity of constructing substantial rig foundations sufficiently strong enough to sustain the normal stresses of drilling and at the same time withstand the movement of strong tides. Rig foundations used in marine drilling cost approximately $30,000 each and for this reason it is quite obvious that a substantial saving is effected when each foundation can be used for the drilling of more than one well to produce from one or more formations. This is especially true because of the fact that wells have been drilled out in the open ocean for a distance of 1,500 feet beyond the tide line.

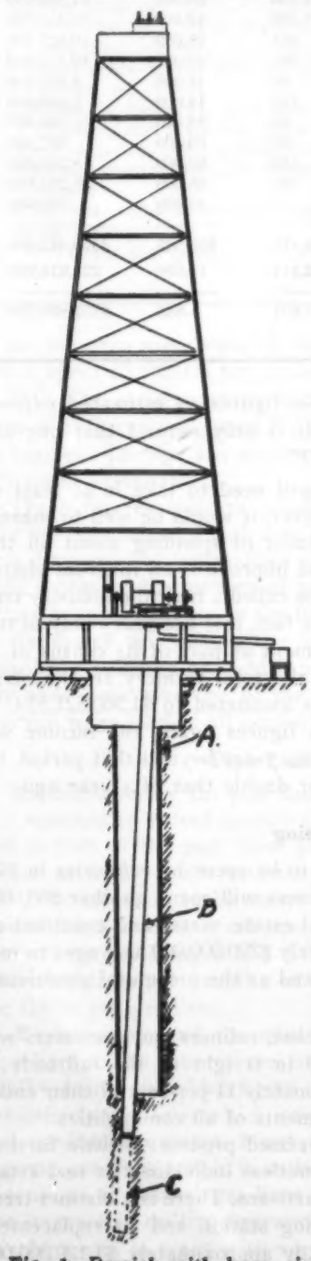


Fig. 1—Derrick with large size conductor pipe (A) and 18-5/8-in. guide pipe (B) set ready to start 17-1/4-in. hole (C) by plural drilling method

The principle of multiple drilling, or to use its initial designation as a method of plural drilling beneath a single drilling site, was patented some time ago by Frank A. Morgan of the Rio Grande Oil Co. and Drexler Dana and covers the drilling of two or more wells by utilizing the same surface equipment, casing and primary hole. The drilling of two holes under the same derrick is by no means new as there are several twin wells in the Long Beach Field which are still pumping from beneath the same derrick but in each case these wells were drilled independently of each other. The method being used by the Barnsdall and Rio Grande in the Elwood Field differs somewhat in fundamental principles because the plan of drilling now employed by these operators consists in the drilling of a primary hole and the subsequent drilling of two or more multiple holes which are engineered in such a manner that they are deviated to the desired point of completion.

Satisfactory Results

The Barnsdall, which is doing the actual development work, has already completed three wells from a common base in the Elwood Field and is at present engaged in drilling another set of twin wells on the same property. Experimental work was first undertaken on tideland permit No. 88 during 1933 and the success achieved has resulted in the extension of similar work. The three wells drilled from a common base were Nos. 9, 9-A and 9-B on tideland permit No. 88 granted by the State of California immediately following discovery of the field. No. 9 was spudded in on October 31, 1932, and completed January 13, 1933, doing 416 bbls. of clean 34.1 gravity oil per day on a compressor from 3,305 feet. The first twin to this well was No. 9-A which was started June 25, 1933 and completed September 21, 1933, flowing 617 bbls. of clean oil per day from 3,372 feet. The second twin to the original well and the third well to be drilled in the primary hole was No. 9-B. This well was spudded February 24, 1934, and finished September 12, 1934, doing 228 bbls. per day on a compressor from 3,245 feet.

On the same tideland permit, the Barnsdall is drilling a twin to well No. 8 which was originally completed flowing 810 bbls. per day from 3,502 feet in June, 1932. The twin, No. 8-A is at present rotating ahead at 3,184 feet and should be completed within the next 30 days unless some unforseen difficulty arises. Due to the fact that not all tideland wells at Elwood are susceptible of multiple drilling because they were drilled before perfection of the present method and consequently do not contain the requisite primary hole, operators are obliged to drill new wells when increasing development work. In order to keep drilling costs down to a minimum, the Barnsdall has adopted the policy of constructing new well foundations immediately adjacent to existing facilities. This plan will be followed when drilling well No. 1-A on tideland permit No. 88 as the location of this well is 25 feet north of well No. 1 which was completed doing 4,200 bbls. per day from 3,477 feet in October, 1929. The rig foundations of these two wells are practically one installation.

Fig. 3—Plan view of arrangement of pipes in completed well shown in Fig. 2

Fig. 3

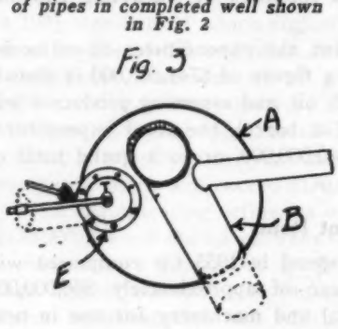


Fig. 4

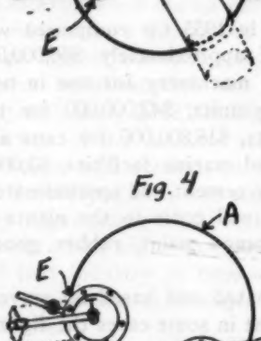


Fig. 4—Plan view of two completed wells drilled by plural method and producing from same sand encountered below 3,100 ft. in Elwood oil field, California

Procedure Followed

In the drilling of these plural wells, it is customary to land a large size conductor string, usually about 50 feet of 48-inch pipe in order to facilitate future drilling. Then an 18⅝-inch temporary guide pipe is set in an inclined position through the larger pipe and driven a few feet below the conductor pipe shoe and then anchored in the cellar. A 17¼-inch hole is then drilled to the point at which a string of 13⅜-inch casing is to be landed and cemented. After the 13⅜-inch pipe has been landed and cemented, the 18⅝-inch guide pipe is stripped away and removed from the hole. In order to line up with the off-center top of the 18⅝-inch pipe, the crown block, rotary table and drawworks are shifted off center but are returned to their normal position after the 17¼-inch hole is safely established in its desired course.

Upon completion of a well, the 13⅜-inch string of casing is pulled over against the wall of the conductor pipe and anchored there. The 18⅝-inch guide pipe, it will be recalled, had been stripped off the 13⅜-inch after the latter had been landed and cemented at the desired depth. The procedure is the same with each additional well drilled in the primary hole as that followed with the first well. The guide string is set in an inclined position and after the 13⅜-inch has been cemented this is again stripped off and the well carried to

(Continued on Page 35)

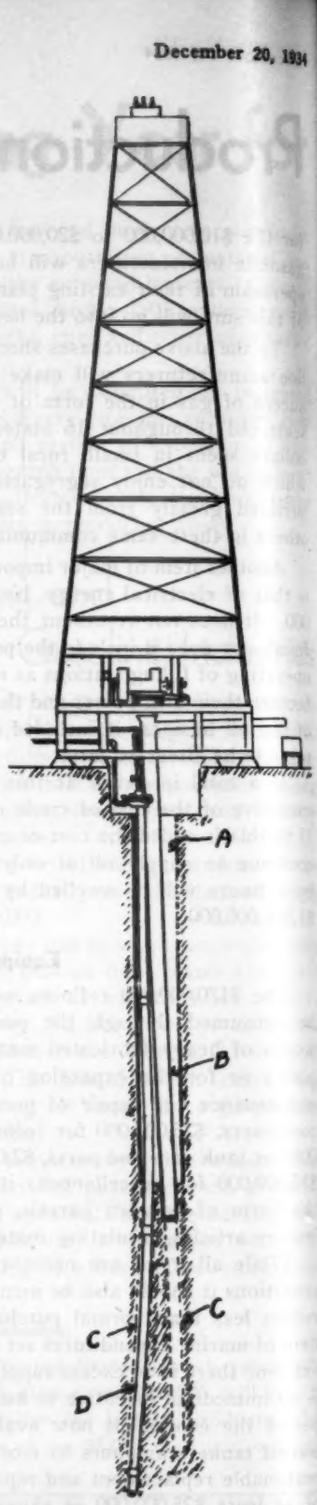


Fig. 2—First well completed by plural drilling method and twin well started with 13-3/8-in. surface pipe (D) in place in 17-1/4-in. hole ready to produce first well

Oil Legislation Topic at Washington; Report of Natural Resources Board Discusses Conservation of Petroleum

By HUGH D. MALLON
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Dec. 18.—By a vote of 11 to 9 the Planning and Coordination Committee today decided to recommend to the Cole investigating committee proposed legislation covering quotas in commerce for crude petroleum, with features permitting the formulation of interstate compacts. The quotas in the commerce section of the proposed bill covers the points which Amos L. Beaty has upheld in the past. Two members of the committee did not vote on the question.

It was also announced at the close of the meeting today that the resignation of Judge Beaty as chairman of the committee had been accepted, effective the end of this week. J. D. Collett of Fort Worth was elected to succeed Judge Beaty. No one has yet been elected vice chairman to succeed Mr. Collett.

The administration is almost daily going on record as favoring control of the industry in some measure, the latest record showing that the National Resources Board appointed by President Roosevelt last April to study and report to him a plan for national planning and public works in relation to natural resources has recommended to the President that federal legislation should be enacted for control of the natural resource industry.

The National Resources Board is composed of Secretary of the Interior and Oil Administrator Harold L. Ickes, chairman; Secretary of War George H. Dern; Secretary of Agriculture Henry A. Wallace; Secretary of the Interior Daniel C. Roper; Secretary of Labor Frances Perkins; Harry L. Hopkins, federal emergency relief administrator; Frederic A. Delano, Charles E. Merriam and Wesley C. Mitchell, Messrs. Delano, Marriam and Mitchell serving as an advisory committee.

Secretary Ickes also acted as chairman of the Planning Committee on Mineral Policy, consisting of Herbert Feis, Leon Henderson, J. W. Finch, W. C. Mendenhall, Willard Thorp, J. W. Furness, F. A. Silcox, C. T. Harris, Jr., and Wayne C. Taylor. C. K. Leith was vice chairman and W. P. Rawles secretary of this committee.

The report of the board is opened with the statement "the natural resources of America are the heritage of the whole nation and should be conserved and utilized for the benefit of all of our people. Our priceless resources of soil, water and minerals are for the service of the American people, for the promotion of the welfare and well-being of all citizens."

It continues with the statement that this principle has not always been followed, but on the contrary, there has been waste and loss of resources accompanied by spoliation and misuse of the natural wealth of the many by the few. "The conservation movement begun a quarter of a century ago marked the beginning of an organized national effort to protect and develop these assets," the report states, and "to some extent the shameful waste of oil has been halted, although with terrible exceptions where ignorance, inattention, or greed has devastated our heritage almost beyond belief."

To cure these evils, and to stabilize these industries, it is recommended by the board that the federal Government assist the mineral industries to attain economic stability, in order that they may minimize waste of natural resources, maintain reasonable wage standards and protect investments.

As a means toward that end it is recommended that careful consideration should be given to collective organization and action by the industries. To accomplish this the proposal is made that there should be "industry control under public supervision of capacity, production, stocks, and sometimes of price." Experience under NRA codes should be analyzed and taken as guides toward the type of control adapted to different mineral industries.

In this connection the board recommends that supervision of mineral codes involving control of production should ultimately be grouped under one agency, in order to facilitate the treatment of urgent problems of interindustry competition, such as the competition between coal and oil.

Immediate Problem

In commenting on the mineral reserves of this country the board said, "The immediate outlook as far as the national resources in minerals are concerned is for abundant supplies available at low prices, lower, in many cases, than those prevailing in the twenties. There is no sign that any serious limiting factor will emerge among the minerals to prevent the Nation from attaining a production of goods and services far above the levels of even 1929. The immediate problem of our major domestic industries is not a shortage, but an unmanageable surplus, much like the surplus in agriculture."

The board continues with the statement that the immediate problem of the surplus and the long-time problem of conservation seem to be in conflict, but claim that the two are caused by the same things, destructive competition of scattered ownership and the overdevelopment of productive capacity. Resource waste, the claim, is most serious in the industries with an unmanageable surplus. "In oil and gas the wastes are proverbial," the board says, and states that "in one field enough gas is being blown into the air to supply all domestic consumers in the United States."

Such wastes, it is conceded, are seldom the fault of the individual operator who has small choice under existing competitive conditions, and it is admitted that the avoidance of such waste is partly a matter of technology. On the whole, though, the board says, prevention of waste is a legal and economic problem which the states can do much to remedy through the exercise of their police power. In the past 10 years it is pointed out several of the states have made attempts to control waste in the production of oil and natural gas, which laws have been generally upheld by the courts.

Although only a beginning has been made along these lines by the states the possibility of replacing the law of capture with the requirement of unitary operation and development of individual pools is coming nearer to realization, the board feels.

Conservation laws of various producing states have, in the past, been held back by the fact that increased costs were the result of such laws and the individual states were held back from the enactment of legislation because it would place the local producers in an unfair competitive position, the board contends.

For Interstate Compact

The report continues: "The necessary pre requisite to encouraging action by the states is economic stability, and some limitation on destructive competition between the states. Interstate compacts for this purpose should be encouraged but are likely to call for complementary action by the federal Government. In the mineral field, the problem of balancing supply and demand is essentially national and requires assistance of the national Government."

"Stabilization is necessary to preserve capital, to maintain reasonable wage standards and steadier employment, and to minimize resource waste," it is stated. "Stabilization requires a central organization and collective action. It may also require permitting control, under public supervision, of production, capacity, stocks and sometimes of price, in

(Continued on Page 31)

Continued Improvement Is Being Shown in Situation in the East Texas District

By L. E. BREDBERG

FORT WORTH, Tex., Dec. 17.—Shipments of refined products from the East Texas Field showed a slump of 468 cars this week, probably brought about by the new state-wide shipping order requiring tenders on crude and refined products, which went into effect on December 10. The drop in gasoline shipments should help in stabilizing the markets throughout the State, already witnessed by price adjustments in many places, principally Dallas, Fort Worth and Houston, where price wars have been holding the third grade product to around 10 cents for the past several months. That grade is now bringing 13 cents and the regular brand is selling for 15 cents, whereas before it was going for 13 cents.

Shipments of refined products from the field, registered as follows, for the week:

	Cars	Gallons
Gasoline	376	3,057,955
Fuel oil	226	2,135,650
Topped crude	687	6,099,595
Casinghead gasoline	106	914,320
Distillate	56	454,250
Gas oil	62	512,125
Naphtha	15	122,075
Kerosene	18	142,780
Residuum	8	68,815

Many cars have been labeled "topped crude," 1,135 cars being shipped under that label the previous week, whereas such shipments were cut to 687 cars this week. Opinion was that other products, principally raw crude or gasoline, were being shipped under the label, "topped crude." Falsely billed crude shipped by tank cars this week, was estimated to be around 20,000 gallons. Untendered gasoline shipped by tank trucks within the State was estimated cut to around 15,000 gallons this week, whereas it has been running far higher than this, although truck movements were considered negligible in comparison to shipments via tank cars. The Railroad Commission feels that movements by tank cars will be practically eliminated at once, whereupon its forces will concentrate on the inspection of truck shipments. Some trucks have been disguised as moving vans. It looks as if nearly every possible means of evasion has been met, and movements of refined products within the State may be curtailed to products regularly tendered and given a clear visa by the commission.

Curtailing movements of refined products has had a resultant effect on overproduction, which is difficult to estimate at the present time, but was considered down by at least half as much as it was the past week, which estimate was placed at 50,000 bbls. If overproduction in the field is brought down to at least 25,000 bbls. per day, and chances are that it will be brought still lower, this should not make material difference in the price structure of either crude or gasoline.

Much topped crude being shipped by East Texas refineries to other refineries within the State, for the purpose of making into gasoline for reshipping, has had its effect on shipments of gasoline directly from East Texas. The Tyreco Refining Co. has brought suit against the Federal Tender Board and its order on the ground of discrimination, stating that no such federal action is taken in other parts of the State, from which "hot" gasoline is forwarded out of the State.

There were only 33 plants operating in the field this week, the remainder, 50, being shut down. Daily average runs amounted to 45,210 bbls., or an increase of around 3,685 bbls. per day. Runs to plants are expected to be cut next week, as products now shipped will be scrutinized by the commission forces to detect their origin, and if manufactured from "hot" oil, cannot be moved. Truck drivers were turned back this week when found with loads of illegal products, the authorities merely giving them warning for a few days before they start filing suits against the carriers under the new state tender order.

There is no question but that conditions in East Texas are as good as can be expected, legitimate operators feeling that overproduction has at last been brought nearly to a standstill, with possibilities of it being eliminated entirely. One trouble remains, the problem of disposing of several thousand gallons of refined products, mostly gasoline, manufactured from "hot" oil. If they "dribbled" out over a period of time, these shipments will probably not be large enough to cause trouble.

State authorities were said to have men checking into gasoline storage in various cities and towns in order to determine whether or not much of such gasoline had been manufactured from "hot" oil and perhaps moved from East Texas just prior to the new tender order becoming effective. If the gasoline proved illegal the State will file suit to prevent its sale.

We pause
to extend
Greetings
to our
friends the
world over
OIL WELL SUPPLY COMPANY

Pennsylvania Refiners Learn of Advantages of Propane Dewaxing

By ROBERT C. CONINE

STATE COLLEGE, Pa., Dec. 17.—Solution of their bright stock problem, a saving of 300 to 800 per cent on their filtering operations, and reduction of their carbon residue, was offered to Pennsylvania grade crude oil refiners at the 1935 program meeting of the technical committee of the Pennsylvania Grade Crude Oil association here. The proposal was that of employing a petroleum refinery product, propane, to dewax, deresinate and fractionate by viscosities their lubricating oil stocks.

P. C. Keith, vice president in charge of research and engineering of M. W. Kellogg Co., who was invited to outline the application in the Pennsylvania Grade region of a process discussed recently at the A.P.I. annual meeting in Dallas, told the technologists present that propane, which is normally a waste product at many refineries, is the universal solvent in the production of crankcase and special lubricants.

Comparatively recently several refiners have proposed that various solvents be used for dissolving selectively those constituents which tend to impart to lubricating oils such undesirable qualities as poor viscosity index and resistance to oxidation, while others have proposed that other solvents be used for removing wax. All of these solvents, Mr. Keith said, are compartaively expensive and are produced by industries not connected with petroleum refining. In view of the wide variety of compounds found in petroleum, he said, it is not surprising that refiners should find in their own raw product a solvent capable of producing not one, but both of these results.

Propane as a liquid at temperatures as low as minus 40° F. is capable of dissolving all of those hydrocarbons which are under normal conditions liquids, rejecting at the same time solid paraffins which normally impart to a lubricating oil a high pour point which to the average motorist means excessive wear on his engine in cold weather during starting. At high tmeperatures, however, propane acts as a selective solvent rejecting those compounds which are resinous or asphaltic in nature and which tend to decrease the viscosity index of lubricating oils. To illustrate the first point Mr. Keith presented data obtained in dewaxing a typical Pennsylvania long residuum by diluting with propane and allowing the propane to evaporate until the temperature reached minus 40° F. and continually removing the wax on a rotary type filter. Specifications on the oil before and after dewaxing, and the yields are shown below: (Propane ratio, 2.5/1)

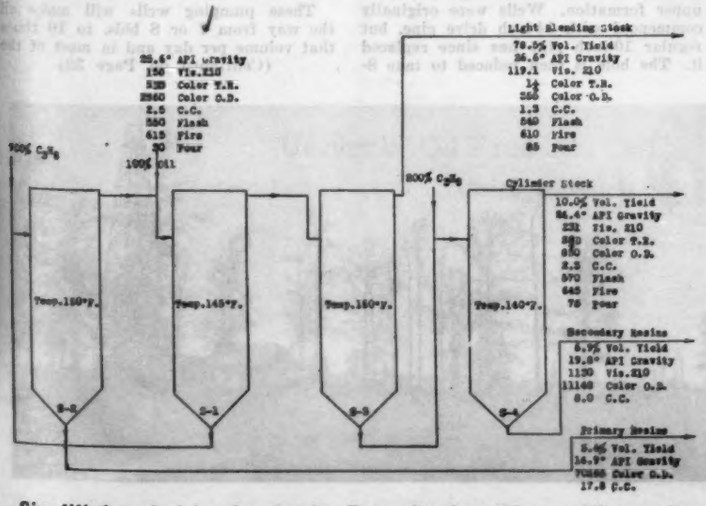
TESTS ON OILS BEFORE AND AFTER DEWAXING

	Original stock	Dewaxed
Gravity	28.6	27.0
Flash	430	430
Fire	485	485
Vis. @ 210° F.	73.8	74.8
Pour	70	—12
Conradsen carbon	1.4	1.4
Percent of wax	14.1	....
Yield	....	*80.6%

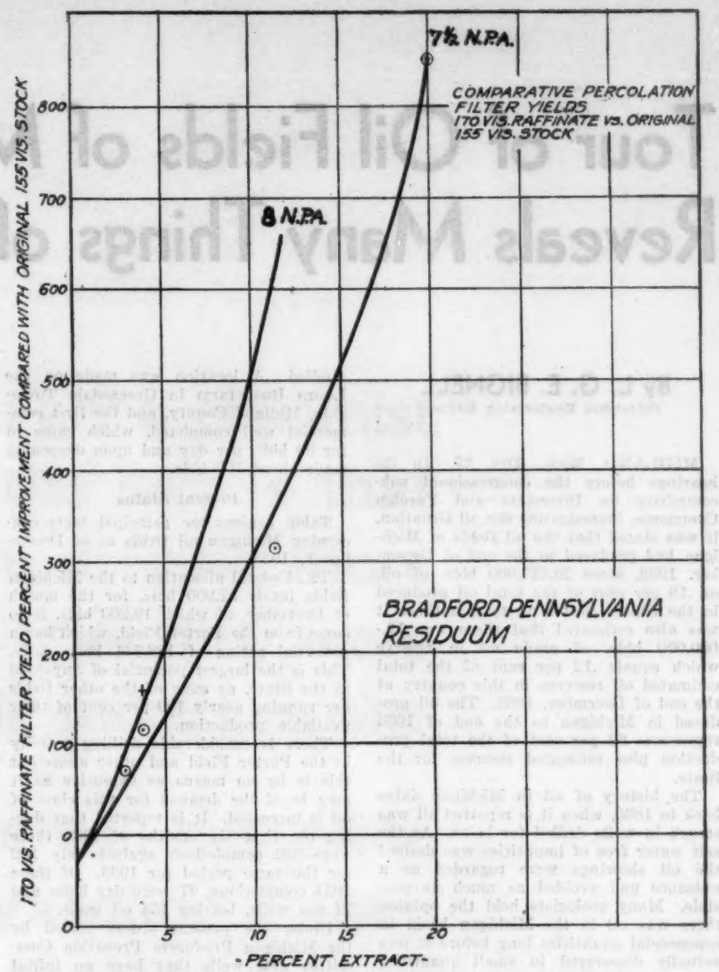
*By volume.

It will be seen from the above table that an unusually low pour point was secured, and to further confirm the evidence that the oil had been completely denuded of paraffin the dewaxed oil was solvent extracted to a fifty per cent yield and the pour point on the dewaxed solvent extracted product was still 0° F.

Another interesting point in connection with this test is that the Conradson carbon had shown no material increase, whereas, by conventional dewaxing, it would be expected that the Conradson carbon increase in proportion to the amount of wax removed. It is a reasonable assumption, therefore, Mr. Keith said, that concurrently with the removal of the wax a considerable quantity of asphaltic material had also been removed.



Simplified method for deresinating Pennsylvania residuum with propane


7½ N.P.A.
8 N.P.A.
COMPARATIVE PERCOLATION FILTER YIELDS ITO VIS. RAFFINATE VS. ORIGINAL 155 VIS. STOCK
BRADFORD PENNSYLVANIA RESIDUUM
ITO VIS. RAFFINATE FILTER YIELD PERCENT IMPROVEMENT COMPARED WITH ORIGINAL 155 VIS. STOCK
-PERCENT EXTRACT-

This was confirmed by subsequent filter yields which showed a 50 per cent increase in filter yield of oil of a given color.

To illustrat the possibilities of using propane for selectively rejecting asphaltic or resinous material a number of slides were shown in which propane fractionation of Pennsylvania residuums was indicated. In this series of runs the Pennsylvania residuums were fractionated by varying both the temperature and the propane concentration so as to secure products of widely varying characteristics. This method of operation was largely adopted to illustrate the possibilities of cold fractionation. This is of particular interest to those refiners who have not installed vacuum towers and who are seeking methods of producing specialties without becoming involved in the griefs of incipient cracking of their lub stocks. The following illustrates the possibilities of fractionating a 170 viscosity at 210° F. Pennsylvania residuum.

Original Chg.—	Prim. Resins—	Lt. Blend'g Stock—	Cylinder Stock—	Sec. Resins—
25.3° A.P.I.	15.4° A.P.I.	26.7° A.P.I.	24.5° A.P.I.	20.7° A.P.I.
172 Vis. 210	.....	121.3 Vis. 210	235 Vis. 210	796 Vis. 210
4½DD Tag.-R.	.....	1¼ Tag.-Rob.	2D Tag.-R.	.....
3090 Col. OD.	59000 OD.	326 Col. OD.	2228 OD.	9450 Col OD.
2.7 Con. Carb.	14.4 C. Car.	1.2 Con. Carb	2.7 C. Carb.	6.1 C. Carb.
575 Flash	.....	550 Flash	570 Flash	.....
640 Fire	.....	630 Fire	650 Fire	.....
.....	.....	80 Pour	60 Pour	.....
% Vol. yield	4.1	73.3	17.3	4.1

Propane System

The propane to oil contacting system is made up of four chambers in which different temperatures are held, as in Figure 2, which represents operation with a lighter residuum. The original charge goes into a tower (agitator) where the temperature is 140° F. This oil passes from the bottom of the tower to a second compartment, at 145° F. where the original propane charge is introduced. At the bottom of this tower the primary resins are withdrawn and the resin-reduced oil returns to the first tower to pass on to a third tower where the temperature is 160° F. At the top of this tower a light blending stock is taken, while from the bottom of the heavier end passes on to a fourth tower where the temperature is 120° F. Cylinder stock is taken off at the top of this tower and secondary resins are withdrawn from the bottom. Characteristics of the five fractions involved are as follows:

Aside from the possibilities of fractionation probably the most important economic point to be gained from the consideration of the flow sheets shown here, according to Mr. Keith, is in the saving in filtering costs in removing some of the resinous materials from the residuums prior to filtration. Mr. Keith presented curves in which the incremental increase in filtering yield was shown as compared to a virgin residuum of somewhat lower viscosity. It was indicated that the filter yields are increased from 100 to 800 per cent, depending upon the amount of material extracted and the color desired on the finished oil. Considering that the filtering cost of Pennsylvania residuum varies from 3 to 6 cents per gallon on stocks charged to the filters, the possibilities of saving on filtering costs are obviously enormous. In addition to the saving in filtering costs there is another very interesting possibility connected with propane fractionation. The resinous cuts removed as bottoms products have viscosities ranging from 1,000 to 1,800 seconds at 210° F. which means that the refiner, by removal of a cut representing somewhat less than 1 per cent of the crude run to stills, can run to 190 to 200 viscosity at 210° F. instead of the con-

(Continued on Page 33)

Tour of Oil Fields of Michigan Reveals Many Things of Interest

By L. G. E. BIGNELL
Petroleum Engineering Editor

MIDLAND, Mich., Dec. 17.—In the hearings before the congressional subcommittee on Interstate and Foreign Commerce, investigating the oil situation, it was stated that the oil fields of Michigan had produced to the end of December, 1933, some 28,211,000 bbls. of oil, or .18 per cent of the total oil produced in the United States up to that time. It was also estimated that there was 17,000,000 bbls. of crude oil in reserve which equals .12 per cent of the total estimated oil reserves in this country at the end of December, 1933. The oil produced in Michigan to the end of 1933 represents 62 per cent of the total production plus estimated reserves for the State.

The history of oil in Michigan dates back to 1865, when it is reported oil was struck in wells drilled for brine. As the salt water free of impurities was desired the oil showings were regarded as a nuisance and avoided as much as possible. Many geologists held the opinion there was oil in the Michigan basin in commercial quantities long before it was actually discovered in small quantities in a well drilled for this purpose by the Saginaw Valley Development Co. in 1912 and 1913 and with the bringing in of a small well in 1925 by the Saginaw Prospecting Co. about 1½ miles to the northwest of the wells opened in 1912.

This was followed by the opening of the Muskegon Field on the west side of the Michigan peninsula in December, 1927, but the real oil development for the State may be dated from the exploratory work undertaken by the Pure Oil Co. prior to February, 1928, when the discovery well in the Mount Pleasant Field was completed.

There is a close connection between the earlier logging operations in this area and the wells drilled to produce salt water from which the salt was extracted. Later other chemicals were obtained from this water and the Dow Chemical Co. of Midland, Mich., has more than 150 wells now producing brines, and up to the time the Pure Oil Co. made a deal with it had withheld the record of those brine wells. After the Saginaw oil wells were discovered these logs were turned over to the Pure Oil Co. and studied. A location was made on the Laura Root farm in Greensdale Township, Midland County, and the first commercial well completed, which came in for 30 bbls. per day and upon deepening made about 100 bbls.

Present Status

Table 1 gives the principal facts concerning Michigan oil fields as of December 1, 1934.

The Federal allocation to the Michigan fields totals 27,900 bbls. for the month of December, of which 19,260 bbls. is to come from the Porter Field, which has a potential rating of 138,741 bbls. daily. This is the largest potential of any field in the State, as most of the other fields are running nearly 100 per cent of their available production.

There is considerable drilling activity in the Porter Field and other areas but this is by no means as extensive as it may be if the demand for this class of oil is increased. It is reported that during the first six months of 1934 there were 222 completions against only 102 for the same period for 1933. Of these 1934 completions, 47 were dry holes and 21 gas wells, leaving 154 oil wells.

Under the present orders issued by the Michigan Producers Proration Committee new wells that have an initial of more than 50 bbls. per day cannot be shot or treated with acid to increase production rate. This ruling is made because the present allowables are based upon 1½ per cent of the oil over 50 bbls. per day that the well can produce.

It has been found in many instances that holes that were apparently dry when first drilled into the Dundee limestone have later made good wells when treated with hydrochloric acid. It is to limit the practice of treating wells able to make more than the allowable with acid or by other means that the rule cited has been enacted, because it was in Michigan that the use of acid for increasing production from limestone formations first had its practical application.

Drilling well upon McClahanan Oil Co.'s property in Porter field, Michigan. White pine tree stump in foreground

Drilling Program

Because the glacial drift over the central part of Michigan covers the sedimentary rocks to a depth of from a few feet to over 1,000 feet it has always been the practice to drill all holes with cable tools and drive the surface pipe immediately after the drill through this loose upper formation. Wells were originally commenced with 14-inch drive pipe, but regular 10-inch pipe has since replaced it. The hole is then reduced to take 8-inch pipe set to case off a cavy formation found above 800 feet and the hole is again reduced to accommodate a string of 6⅝-inch casing mudded through the Marshall formation that contains valuable brine that must be carefully shut off.

The oil string is generally 5¼-inch set in the lime formation from 1 to 10 feet below the top of the Dundee. In the Mount Pleasant and Porter Pools this string is from 3,400 to 3,500 feet long and is set on bottom with a steel shoe, but occasionally enough drilling mud is left in the hole to mud behind the pipe and assist in preventing oil and gas from breaking out around the shoe.

The wells will flow naturally for a time, but in the older fields practically all are on the pump and being operated through central powers or on the beam with gas engines set to furnish power. There is ample gas available for pumping the wells by either method, although electric power is also to be had in most of the Michigan oil fields as high voltage power lines cross the district.

These pumping wells will make all the way from 7 or 8 bbls. to 10 times that volume per day and in most of the

(Continued on Page 33)

TABLE 1

Field—	County	Discovery date	Producing formation (ft.)	No. wells Dec. 1, 1934	Grav. of oil
Saginaw	Saginaw	July, 1925	1,820–1,850	101	42.0
Muskegon	Muskegon	Dec., 1927	2,050–2,075	139	37.0
Greensdale	Midland	Feb., 1928	3,510–3,575		41.8
East Extension	Isabella	May, 1931	.....	302	42.0
Porter	Midland	Late in 1931	3,410–3,450	275	40.4
Vernon	Isabella	1929	3,700–3,725	53	44.5
Leaton	Isabella	1929	3,615–3,675	29	42.0
Ogeman	Ogeman	June, 1932	1,700–1,750	22	36.0
Hart	Oceania	1932	1,860–1,900	17	34.0
Edmore	Montcalm	1933	3,045–3,120	4	42.0
Lapeer	Lapeer	1934	1,480–1,482	4	...
Beaverton	Gladwin	1934	.....	1	...
Yost (Porter)	Midland	....	.....	14	...
				965	...

General view in Porter field, Midland County, Michigan showing some of the activity in this area

Whether you are a pessimist or an optimist the fact is that more people are driving more cars more miles than they were a year ago—using more gasoline

More motorists will buy more Dubbscracked gasoline if they can get it—and keep on buying it—and pay the price for it

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Causes for Oil Entrainment in Absorbers Identified and Safeguards Are Suggested

By F. A. ASHRAF,[1] T. L. CUBBAGE,[2] and R. L. HUNTINGTON
University of Oklahoma*

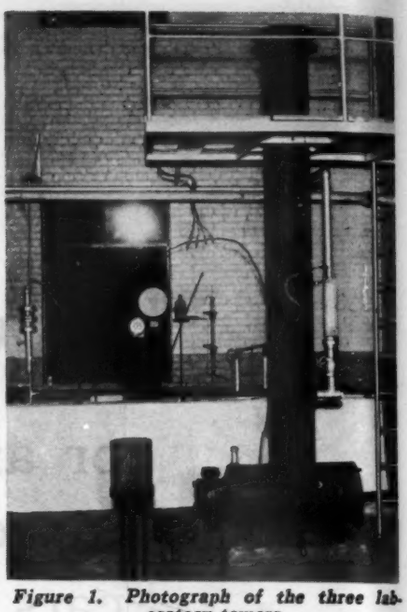

Figure 1. Photograph of the three laboratory towers

Entrainment, or the mechanical carrying of liquid droplets from one tray to another has long been recognized as a detriment to the efficiency of all types of bubble-plate towers. Impairment of color is not so important in oil absorbers as it is in fractionating columns, where entrainment even to a small degree may throw certain products off specification. Loss of absorption oil, however, from oil absorbers into the dry residue gas not only causes an added cost to the manufacturer of natural gasoline but also lowers the value of such gas when used as a raw product for carbon black manufacture. When residue gas is blown into the air in large quantities, entrained oil creates a hazard and a nuisance as it settles on surrounding dwellings and growing crops.

Entrainment has been partially solved, in an empirical manner, by an increase in the distance between plates and by the installation of various types of mist extractors located immediately below each plate and in the top of the tower several feet above the top tray. There has also been a trend toward larger down-spouts so as to prevent the possibility of excessive liquid submergence on each tray when higher rates of reflux or liquid absorbent might be used. These improvements have given the towers a wider range of liquid and vapor capacities, but have not given the manufacturers of such equipment the required quantitative data so badly needed for the intelligent design of bubble towers.

Souders and Brown (6) have developed a relationship between the allowable mass velocity of a rising stream of vapor and the densities of liquid droplets and vapor fluid. By equating the upward force given to the droplet to the downward pull of gravity, the following expression has been obtained by these investigators:

$$W = C\,[d_v(d_l - d_v)]^{1/2}$$

where
W = mass velocity of vapor.
C = a constant.
d_v = density of fluid or vapor.
d_l = density of liquid droplets.

Carey (1) offers another equation which is a simplification of Souders and Brown's equation and should give substantially the same result, except for high-pressure fractionating equipment or whenever the value of d_v is sufficiently large in relation to d_l to have an effect on the numerical value of the expression $(d_l - d_v)$:

$$U = K\left(\frac{\text{liquid density}}{\text{vapor density}}\right)^{1/2}$$

where
U = linear velocity, ft./sec.
K = a constant.

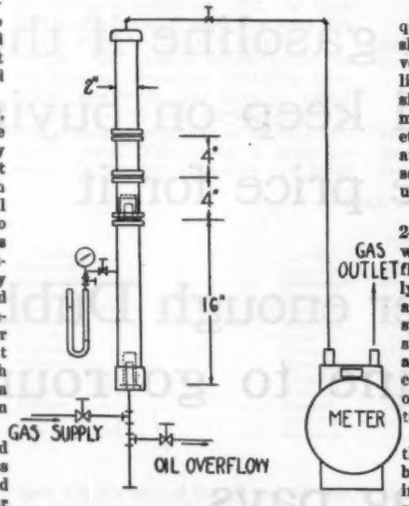

Figure 2. Standard 2-inch wrought-iron pipe column

Chillas and Weir (2) have obtained some quantitative data with air and water and have shown how entrainment is reduced by means of a mist extractor. Holbrook and Baker (3) have recently reported results of a laboratory investigation in which steam and salt water were used in a bubble-plate tower.

Experimental Work

The writers have realized the need of quantitative data showing the relationships between the numerous variables involved, such as tray spacing, gas and liquid densities, velocities, surface tension, ratio of liquid to vapor, liquid submergence, chimney and bubble-cap design, etc., and have therefore set up and operated two small laboratory columns and a semicommercial tower, shown in Figure 1:

To the left of the window is a standard 2-inch wrought-iron pipe column, equipped with a bubble cap at the base and three flanges, 16, 20 and 24 inches, respectively, above the bottom tray. A movable tray assembly is bolted in place at the 20-inch spacing. To the right of the window is a small glass column, 1 3/10 inches I.D., and in the right foreground is the semicommercial fractionating column with its overflow weir and one of its removable trays standing on the floor nearby.

The glass column has a bubble cap at the base and a movable tray which can be manipulated from overhead. The 12½-inch I.D. semicommercial tower was primarily designed for studies in fractionation, but, since it has not been insulated as yet, it is being used temporarily as an absorber. Compressed air, which is piped to the tower through a 2-inch pipe, is available in sufficient quantities for linear velocities up to 2½ feet per second. This column is equipped with three removable trays; the spacing between them can be varied by changing the length of the down-spout and spacer nipples. Each tray has a rim which provides an annular space of about one-quarter inch between the rim and the inside wall of the tower into which asbestos rope (soaked with sodium silicate) can be tightly packed. Figure 2 shows the design of the 2-inch iron tower and Figure 3 the details of the glass column. Table 1 gives the various dimensions of the trays, caps, chimneys, etc., for the three laboratory columns, and Table 2 the physical properties of the liquids and gases used in the different columns.

In order to duplicate as closely as possible conditions in the top of an absorber, kerosene was chosen as the liquid and a dry natural gas and air as the vapor mediums.

Laboratory Glass Column—The small glass column was operated in order to observe the froth levels and the effective lengths of the slots, as well as to measure the entrainment with different tray spacings. Since the percentage of kerosene which was thrown from the lower tray to the upper was never more than 5 per cent, the liquid level on the lower tray remained substantially constant. The upper tray was filled with glass wool, and the vapor was made to pass through the glass wool by means of a reflector cap. The increase in weight of the glass wool gave a measure of the entrainment. Cotton was first tried but proved ineffective since it was not readily wetted by an oil mist.

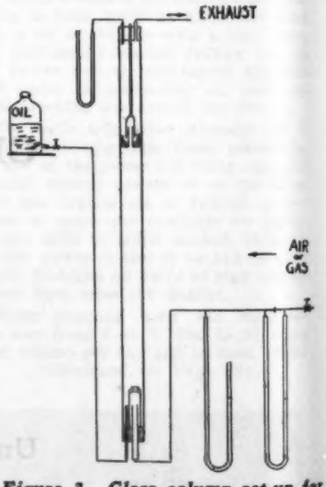

Figure 3. Glass column set-up for gravimetric determination of entrainment

Two-Inch Iron Pipe Column—This column was designed for the study of pressures from atmospheric up to 100 pounds

TABLE 1—DIMENSIONS OF COLUMNS[a]

	I.D. of tower (ins.)	No. of chimneys	Chimney I.D. (ins.)	Chimney O.D. (ins.)	Length from bottom of plate (ins.)	a^b/A
Glass column	1 3/10	1	44/100	1/2	2	0.114
2-inch iron tower	2 7/100	1	3/4	1	2 3/4	0.14
12½-inch iron tower[a]	12 1/2	1	3	2 3/8	2 1/4	0.05

Bubble Cap

Shape	Column	No. of caps	Bubble caps I.D. (ins.)	Bubble caps O.D. (ins.)	Slots No.	Slots Length (ins.)	Slots Width (ins.)	Slots Total area (sq. ins.)	Slot area / Tower area	Liquid Submergence[c] (ins.)
Round	Glass	1	3/8	4/8	12	9/10	1/32	34/100	0.255	2.0
Round	2-inch	1	3/8	5/8	16	1	1/32	1/2	0.149	2.5
Square	12½-inch	3	1 5/8	...	32	1	3/16	12	0.0975	1.0

[a] Commercial absorber, 7x30 feet; 10 trays, 22-inch spacing; 6 feet from top tray to top of absorber. Two mist extractors, 4 feet above top tray.
[b] Ratio of the cross sectional area of the chimneys to that of the tower.
[c] From the top of the slots to the surface of the liquid.

*Presented before Kansas City meeting of American Chemical Society and published in October issue Industrial and Engineering Chemistry.
[1] Anglo-Persian Oil Co., Teheran, Persia.
[2] Phillips Petroleum Co., Bartlesville, Okla.

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UNION WIRE LINES

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per square inch gauge. The method of operation was similar to that of the glass column.

Fractionating Column, 12½ Inches I.D. In order to obtain quantitative data which would more nearly approach that of commercial towers, the semicommercial column shown in Figure 1 was connected with an air line. The down-spouts were plugged, kerosene highly colored with a nonvolatile oil-soluble purple dye was put on the lower tray, and clear kerosene was poured onto the upper tray. The degree to which the clear kerosene was colored during the run gave a measure of the amount of entrainment.

Discussion of Results

The results from the several laboratory columns, as well as actual operating data from some commercial absorbers in the Oklahoma City Field are shown in Tables 3 and 4 and Figures 4 to 10. As might be expected, the data obtained from the small columns do not give results which are as comparable with commercial towers as the runs made on the 12½-inch I.D. tower; moreover, it is inconsistent to attempt to compare laboratory data with overhead entrainment from commercial absorbers since the space above the top tray in an absorber is usually from 4 to 6 feet in height.

Data From 2-Inch Iron Pipe Column Showing Effect of Pressure on Entrainment—Figure 4 shows the relationship between entrainment and mass velocity for three different operating pressures with a tray spacing of 24 inches. Data from the same set of runs have been plotted in Figure 5 giving the entrainment in pounds per hour per square foot of cross-sectional area of the tower vs. linear velocity. The two graphs show that more gas can be processed at higher pressures for the same entrainment but that the permissible linear velocity falls off with increasing operating pressures because of the bouyancy of the denser gas surrounding the liquid droplets.

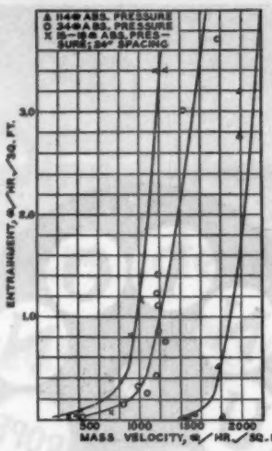


Figure 4. Entrainment vs. mass velocity for lines of constant pressure and a kerosene-natural gas system

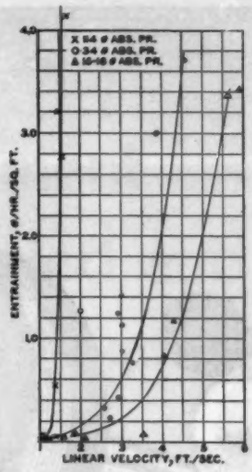


Figure 5. Entrainment vs. linear velocity at different operating pressures for a kerosene-natural gas system

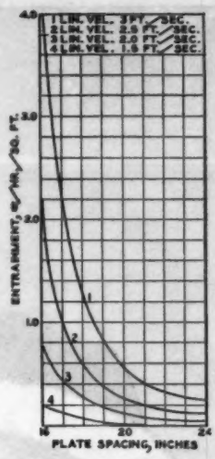


Figure 6. Entrainment vs. plate spacing at atmospheric pressure for a kerosene-natural gas system in the 2-inch iron pipe column

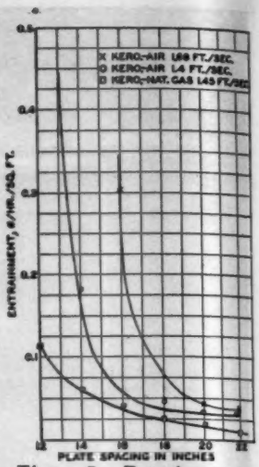


Figure 7. Entrainment vs. plate spacing for lines of constant linear velocity at atmospheric pressure in the glass column

Table 3 includes the values of C in Souders and Brown's equation and of K in Carey's equation; these values were calculated from the experimental data.

Effect of Plate Spacing—Figure 6 shows a cross plot of data obtained on the 2-inch iron pipe column at atmospheric pressure, giving the relationship between entrainment and plate spacing for lines of constant linear velocity. These curves show that a certain amount of entrainment takes place regardless of the distance between plates, entrainment which is probably due to the suspension of very minute liquid droplets in the gas stream. At lesser spacings a large part of the entrainment is the result of splashing of comparatively large drops, caused by the jetting action of the gas.

Figure 7 shows the effect of plate spacing from data obtained on the glass column. The curves are similar to those in Figure 6.

Submergence, Froth Height, and Pressure Drops—Data from the glass column are given in Figure 8 showing the height of froth and the effective length of the slots at various linear velocities. Daube (7) bubbled various gases through a soda ash solution and found that the height of the froth produced was a function of linear velocity and not mass velocity. From a theoretical standpoint one would expect the kinetic energy of the bubbles making up the froth to be a controlling factor. Of course, the mass of a bubble may be largely that of the liquid film surrounding the vapor or gas. However the data for air fall slightly higher than

(Continued on Page 45)

TABLE 2—PROPERTIES OF MATERIAL

Column—	Liquid, or gas—	Pressure at 14.2 lb. abs. density lb./cu. ft.	Viscosity at 70° F. Centipoises	Surface tension at 70° F. Dynes/cm.
Laboratory	Kerosene	50.5	1.95	29.0
	Natural gas	0.0450	....	....
	Air	0.0734	....	....
7-ft. I.D. commercial	Dry residue gas	0.05	....	....
	Gas oil	52.2	4.57	30.9

TABLE 3—EXPERIMENTAL DATA

A. Std. 2-Inch Wrought-Iron Pipe Laboratory Column; Kerosene-Gas System; Tray Spacing, 16 Inches; Entrained Liquid Caught in Glass Wool

Run No.	Entrainment lb./sq. ft./hr.	Linear velocity ft./sec.	Abs. tower pressure lb./sq. in.	Tower temp. °F.	Vapor density lb./cu. ft.	Mass velocity of vapor W lb./sq. ft./hr.	Souders and Brown's constant, C[a]	Carey's constant, K[b]
9G	0.161	1.32	14.80	75	0.0491	232	148	0 041
11G	0.186	1.42	14.80	70	0.0498	255	161	0.045
12G	0.121	1.66	15.15	75	0.0515	308	191	0.053
13G	0.318	1.62	15.10	77	0.0514	300	185	0.052
14G	0.114	1.37	14.60	75	0.0487	240	153	0.043
15G	0.300	1.97	15.10	74	0.0515	357	221	0.063
16G	0.085	0.94	14.45	73	0.0475	161	104	0.029
17G	0.373	1.40	14.60	75	0.0472	238	154	0 043
18G	0.286	1.16	14 70	73	0.0486	203	130	0.036
19G	0.144	1.36	14 72	7/	0.0497	244	154	0.043
20G	1.150	2.12	15.67	65	0 0555	424	253	0.070
21G	0.951	2.14	15.67	75	0.0523	412	251	0.070
22G	0.016	0.72	14.10	70	0.078	202	102	0.028
23G	3.320	2.34	16.10	64	0.0587	495	288	0.080
24G	0.294	1.95	15.35	64	0.0528	371	227	0.063
25G	0.084	0.94	14.35	64	0.0463	157	102	0.028
26G	0.006	0.64	14 35	63	0.0471	108.7	70.8	0.020
27G	0.887	2.09	15.60	63	0.0553	417	264	0.069
28G	3.400	2.29	15.88	63	0.0573	471	277	0.077
29G	0.260	1.90	15.50	63	0.0542	371	224	0.095

B. Same as A With 24-Inch Tray Spacing

51G	0.025	1.60	16.60	69	0.0530	306	187	0.052
52G	0.030	2.04	17.60	69	0.0505	370	221	0.065
53G	0 083	1.94	15.55	66	0.0593	414	239	0.067
54G	0.050	3.57	17 90	66	0.0572	735	432	0.120
55G	0.815	4.07	19.10	67	0.0622	911	514	0.143
56G	1.165	4.34	20.20	67	0.0644	1005	557	0.155
57G	0.341	2.76	34 00	67	0.1090	1085	463	0.128
58G	0.324	2.54	34	70	0.1087	995	424	0.117
60G	0.418	2.99	34	70	0.1080	1165	498	0.138
61G	0.019	1.14	34	70	0.1100	451	191	0.053
62G	0.862	3.05	34	70	0.1093	1202	511	0 142
63G	1.230	2.96	34	75	0.1080	1155	493	0.136
64G	1.120	3.04	34	75	0.1082	1185	507	0.123
65G	0.123	2.04	34	80	0.1120	825	346	0 096
83G	0.015	1.15	114	73	0.3570	1480	348	0.097
84G	2.700	1.55	114	74	0.3565	1990	468	0.130
85G	0.010	1.32	144	74	0.3565	1563	368	0.102
86G	0 015	1.455	114	78	0.3570	1870	440	0.122
87G	3.20	1.48	114	67	0.3790	2020	461	0 128
88G	0.758	3.27	34	70	0.1086	1275	545	0.151
89G	3.69	4.60	34	69	0.1086	1800	768	0.213
90G	3.40	5.98	13.6	63	0.0590	1270	733	0.204
91G	0 52	1.37	114	60	0.3655	1800	419	0.117
93G	0.008	1.13	114	61	0.3670	1495	347	0.097
94G	0.00014	1.145	114	70	0.3605	1488	348	0.097
95G	3.0	3.81	34	60	0.1055	1450	625	0.174
96G	3.39	5.63	17.35	60	0.0578	1170	682	0.191
97G	1.42	3.01	34	60	0.1096	1190	503	0.140

C. Same as A With 20-Inch Tray Spacing

106G	0.112	1.99	14.40	86	0.0417	299	206	0 062
107G	0.142	2.36	14.65	83	0.0449	381	253	0.070
108G	1.010	3 48	15.37	83	0.0468	586	381	0.106
109G	0.111	2.14	14.52	83	0.0444	342	228	0 064
110G	0.716	3.10	15.10	83	0.0467	521	338	0.094
111G	0.708	3.98	15.85	82	0.0480	690	444	0.120
112G	1.225	4 18	15.95	82	0 0483	727	466	0.129
113G	2.010	5.32	16.35	82	0.0514	985	612	0.169
114G	0 414	3.00	15.00	79	0.0467	504	327	0.091
115G	0.019	1.11	34.00	79	0.1054	422 5	184	0.051
116G	0 915	3.78	15.60	79	0.0498	678.0	427	0.119
117G	1.490	4.29	16.10	79	0.0500	772.5	486	0.133

D. 12½-Inch I.D. Wrought-Iron Fractionating Column; Kerosene-Air System; Tray Spacing, 16 Inches; Entrained Liquid Dyed Purple

1S	0.2015	1.09	14.1	80	0.075	294	154	0.042
2S	1.002	1.54	14.1	83	0.074	412	212	0 059
3S	0 186	0.907	14.1	83	0.074	245	126	0.035
4S	0.0661	0.727	14 1	86	0.074	195	101	0.028
5S	0.14	0.93	14.1	86	0.074	250	129	0.036
6S	0.658	1.31	14.1	85	0.074	353	182	0.050
7S	3.26	2.2	14 1	84	0.074	590	304	0.084
8S	0 034	0.55	14.1	72	0.075	148	77	0 021
9S	1.07	1.52	14.1	74	0.075	403	212	0.059
10S	4.05	1.92	14.1	74	0.075	516	269	0.074
11S	2.44	1.88	14.1	74	0.075	506	263	0.072

E. 7x30-Foot Commercial Absorbers; 10 Trays, 22-Inch Spacing; 6 Feet From Top Tray to Top of Absorber; Two Mist Extractors Located 4 Feet Above Top Tray; Gas Oil-Residue Gas System

1C	0.72	1.88	45	60	0.16	911	217	0.088
2C	0.89	1.52	45	60	0.16	877	305	0.084
3C	0 96	1.60	45	60	0.16	924	221	0.089
4C	1.22	1.90	45	60	0.16	1093	380	0.105
5C	1.35	1.88	45	60	0.16	1081	375	0 104
6C	1.51	2.25	45	60	0.16	1295	450	0.125
7C	1 72	2.05	45	60	0.16	1180	409	0.114
8C	1.84	2 16	45	60	0.16	1241	431	0.120
9C	2.38	2.44	45	60	0 16	1405	488	0.135

TABLE 3-A

F. Laboratory Glass Column; Kerosene-Air System

Run No.	Entrainment Lb./sq. ft./hr.	Linear velocity Ft./sec.	Tray spacing inches	Abs. tower pressure Lb./sq. in.	Tower temp. °F.	Vapor density Lb./cu.ft.	Mass velocity of vapor, W Lb./sq. ft./hr.	Souders and Brown's constant, C[a]	Carey's constant, K[b]
1A	0.038	1.68	22	14.1	80	0 071	428	225	0.063
2A	0.042	1 68	20	14.1	80	0.071	428	225	0.063
3A	0.077	1.68	18	14.1	80	0.071	428	225	0.063
4A	0.302	1.68	16	14.1	80	0.071	428	225	0 063
5A	0.58	1.40	12	14.1	68	0.073	368	192	0.053
6A	0.18	1.40	14	14.1	68	0.073	368	192	0.053
7A	0.037	1.40	18	14.1	68	0.073	368	192	0.053
8A	0.034	1.40	20	14.1	68	0.073	368	192	0.053
9A	0.031	1.40	22	14.1	68	0.073	368	192	0.053

G. Same as F for Kerosene-Natural Gas System

10A	0.112	1.45	12	14.1	68	0.044	230	154	0.042
11A	0.06	1.45	14	14.1	68	0.044	230	154	0.042
12A	0 04	1.45	16	14.1	68	0.044	230	154	0.042
13A	0.025	1.45	18	14.1	68	0.044	230	154	0.042
14A	0.018	1.45	20	14.1	68	0.044	230	154	0.042
15A	0.01	1.45	22	14.1	68	0.044	230	154	0.042

[a] $C = \frac{W}{[d_2(d_1 - d_2)]^{1/2}\, U}$

[b] $K = \frac{}{(d_1 d_2)^{1/2}}$

NEWS FROM FOREIGN LANDS

ITALY

Refineries in Italy are refining approximately 3,500 bbls. of crude oil daily according to available information covering imports and domestic production. Official reports indicate that the crude oil production amounts to 700 bbls. daily and imports so far this year have been about 2,800 bbls. daily.

That companies operating in Italy which are planning a large refining construction program, refine only a small part of the domestic requirements at present is indicated in the data which show that imports of gasoline total approximately 6,000 bbls. daily and fuel oil imports 18,000 bbls. daily.

Plans are now under way which will result in new plants having a crude oil capacity of at least 20,000 bbls. daily being built.

Government reports show that the consumption of most petroleum products in Italy are increasing the gain in gasoline demand amounting to approximately 20 per cent.

The imports into Italy for the first eight months of 1934 and 1933 are as follows (data in tons):

	1934	1933
Crude oil	98,000	90,000
Fuel oil	725,000	685,000
Gasoline	209,000	187,000
Kerosene	83,000	79,000
Lubricating oil	43,000	43,000

RUMANIA

The October crude oil production in Rumania totaled 735,000 tons. This is a daily average of 165,900 bbls. and about 2,000 bbls. less than the daily average in September. The daily average of the five leading producers in October was as follows (data in tons):

Astra Romana	155,612
Concordia	103,467
Steaua	102,335
Phoenix	81,043
Romano-Americana	75,303

The latest available government report on exports from Rumania for the first eight months of 1934 covering crude oil and refinery products are as follows: England, 102,844 tons; Italy, 66,096 tons; France, 54,966 tons; Egypt, 40,268 tons; Austria, 30,509 tons; Germany, 79,246 tons; Spain, 21,245 tons; Hungary, 17,136 tons, and Greece, 15,732 tons.

VENEZUELA

The agreement between the subsidiaries of the Standard Oil Co. (New Jersey) and the Pantepec Consolidated of Venezuela, Inc., covering the development of concessions of the latter company in eastern Venezuela has been concluded and will become effective the first of the year according to announcements in New York this week. The terms of this agreement were first announced last summer by the Pantepec company.

Final approval of the agreement has been held up pending examination and approval of titles by the Standard company. It is understood that extension of about $2,000,000 indebtedness of the Pantepec has been arranged the time of payment now being January 1, 1939.

The agreement is between the Standard Oil Co. of Venezuela, a wholly-owned subsidiary of the Creole Petroleum Corp. which is controlled by the Standard of New Jersey and the following subsidiaries of the Pantepec Consolidated: Pantepec Oil Fields Corp., Alamo Oil Corp., Venezuela Pantepec Co. and the American Venezuelan Oil Fields. The principal terms of the contract as previously announced are:

Standard will at its own expense drill six wells within a period of three years at locations to be selected by Standard. Each of these wells will be drilled to a minimum depth of 4,000 feet.

Standard will pay all government taxes on these concessions from the date the contract becomes effective until it fulfills the obligation to drill the six wells referred to.

Other terms of the contract covering additional development were explained in the July 12, 1934, issue of The Oil and Gas Journal, page 18.

FRANCE

Imports of crude oil and most of the refinery products into France during October showed declines when compared with the averages of previous months. Crude oil imports for October totaled 296,784 tons, or approximately 67,000 bbls. daily. The average for the first 10 months of this year has been about 80,000 bbls. daily. Imports of gasoline, kerosene and lubricating oils also were below the averages earlier in the year.

For the first 10 months crude oil imports into France were approximately 60 per cent more than the same period in 1933 with declines ranging from 10 to 50 per cent in imports of finished products. Following are the imports for the first 10 months of 1934 and 1933 (data in tons):

	1934	1933
Crude oil	3,435,028	2,150,239
Gasoline	33,831	76,058
Lubricating oil	915,503	1,488,818
Gas oil	135,907	162,805
Fuel oil	329,238	547,962
Road oil	47,047	72,999

GERMANY

As in previous months, imports of petroleum products into Germany during September based on an official report showed gains over the same month last year. The following table gives the imports for September (data in tons):

Crude oil	23,183
Gasoline	117,314
Kerosene	7,580
Gas oil	62,873
Lubricating oil	29,444
Fuel oil	33,355

PERU

Crude oil production in Peru for October was slightly greater than in September, averaging 42,050 bbls. daily and 41,996 bbls. daily the previous month. In October, 1933, the crude oil production averaged 31,304 bbls. daily.

U. S. S. R.

Crude oil production in the U. S. S. R. in October totaled 2,077,900 tons. This total is slightly less than October, 1933, and is the first time this year that the monthly production has been below the corresponding month of 1933. As in September the October total was 90 per cent of the plan. For the entire ten months crude oil production totaled 20,001,900 tons which is about 13 per cent above the 1933 total for the same period. Earlier in the year the crude oil production was running 20 per cent ahead of 1933.

Drilling in October was substantially ahead of October, 1933. It totaled 96,705 meters, which compares with 91,184 meters in October, 1933. For the first ten months of this year drilling has totaled 1,071,048 meters, which was 56 per cent more than the first 10 months of 1933. However, drilling for the first 10 months is only 71 per cent of the plans of the government announced at the start of the year. The government program on wildcat drilling is further behind than that outlined for the proven fields. The government had expected to do a great amount of drilling in new areas but this drilling is less than 60 per cent of the program.

In the refining end, crude oil runs to stills in October were less than in September and about the same as October, 1933. The crude to stills in October totaled 1,685,700 tons or 380,000 bbls. daily. This is about 90,000 bbls. less than the current crude oil production, indicating that some crude is being run to storage. The October runs were 88 per cent of the government plan. The production of gasoline in October totaled 242,800 tons, which was less than 249,900 tons total in October, 1933. The producton of kerosene and kerosene distillate showed an increase over October of last year.

The latest available reports of U. S. S. R. oil exports covering the period ending in August show they are running substantially behind 1933. Exports of crude oil are running ahead of 1933 but all refinery products are less than 1933 with the exception of lubricating oils which show a slight increase. The exports from January 1 to August 31, for 1934 and 1933 are as follows (data in tons):

JANUARY TO AUGUST	1934	1933
Crude oil	151,443	139,950
Gasoline	529,068	981,666
Kerosene	268,293	445,434
Gas oil	393,761	414,152
Lubricating oil	175,294	172,699
Fuel oil and distillate	926,613	1,178,010
Paraffin wax	7,779	3,414
Paraffin wax	7,779	3,414
Other oils	702	345
Total	2,777,169	3,361,871

TRINIDAD

The Trinidad legislative council has passed a resolution urging that the home government accord petroleum products from Trinidad preference in regard to taxes in the United Kingdom. It is pointed out that certain other products obtained from the colonies enjoy this preferential position in a general plan to stimulate business within the empire. A. W. Rogers, chairman of the board of the Trinidad Leaseholds, Ltd., also urged this action at the recent annual meeting. It is said that the plan is favored by important government officials in Great Britain.

Exports of crude oil and refinery products from Trinidad, most of which go to the United Kingdom, have shown a substantial increase this year over 1933. The following table gives the exports for the first nine months of this year (data in Imperial gallons):

Crude oil	11,681,718
Gasoline	65,593,487
Kerosene	1,334,498
Fuel oil	181,920,941
Lubricating oil	3,168
Road oil	647,088
Total	261,630,900

Total exports for the same period in 1933 were 238,060,238 gallons and in 1932, 260,790,787 gallons.

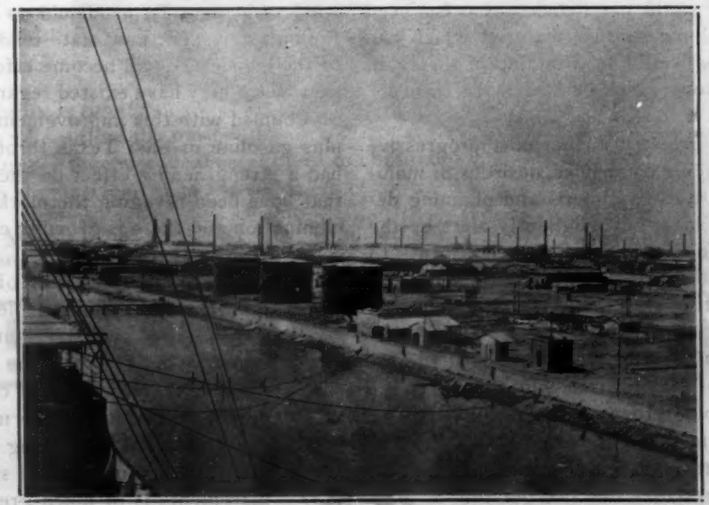
GREAT BRITAIN

Imports of crude petroleum and refinery products into the United Kingdom showed a substantial gain in October according to a government report. The imports totaled 238,684,000 imperial gallons which is a gain of 33,985,000 gallons, or 16.6 per cent over the 204,699,000 gallons for October, 1933.

The following table gives the imports for the two months (data in imperial gallons):

	October	
	1934	1933
Crude oil	39,373,000	25,589,000
Gasoline	101,558,000	87,332,000
Kerosene	28,134,000	11,712,000
Lubricating oil	3,372,000	12,556,000
Gas oil	11,940,000	5,364,000
Fuel oil	57,474,000	57,337,000
Other oils	1,843,000	1,039,000
Total	238,684,000	204,699,000

The decrease in imports of lubricating oils is said to be due to the increased production of lubricants at refineries located in Great Britain. The value of the imports in October this year were 2,670,000 pounds sterling and 2,466,817 pounds sterling for October, 1933. For the first 10 months of this year the imports into the United Kingdom totaled 2,285,459,000 imperial gallons which is greater than the 2,057,044,000-gallon total for the same period in 1933.



Abadan refineries on Shatt-el-Arab river, Persia

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Oil Marshal of Parade

The oil industry has never received just recognition for the immense business it has created, the millions of men thereby given employment, the hundreds of millions thus added to wages, and the billions of dollars it has contributed in taxes to the states and nation.

The facts presented elsewhere in this issue of The Oil and Gas Journal show how oil has added to the wealth of the nation through the pioneering development of natural resources, how great industries, including the largest in the country, (agriculture alone excepted,) have been built upon it or vastly enlarged by it.

The oil industry has been not only a most potent factor in expanding the country's industry and business but, during the years of depression, has been a solid anchorage in tempestuous times. While most industries suffered losses of more than half of their business the oil industry retained over 92 per cent of its domestic trade enabling it to continue employment at a much higher level than almost any other industry.

It stood out during the past year as the one industry that has been able to regain a normal price level for its raw material which had dropped to an all time low. It has been able to maintain that gain while it struggled to correct conditions which held back the recovery of the refined market.

Today the situation within the industry is the most progressive it has been for several years. Producing companies, desirous of maintaining reserves, are expanding their commitments and planning development. The manufacturing division, kept vigilantly alert by the unceasing research seeking improved fuels and better lubricants to meet the changing requirements of the new motor cars, is being obliged to contemplate the expenditure of millions for additions and replacements in its plants.

This investment is being cheerfully considered because of the increasing promise that some form of stabilization will be attained that will assure a reasonable return on operations, somthing the industry has not had for several years.

During the 13 years from 1921 to and including 1933 the net earnnigs of the oil industry represented but 1.66 per cent on the investment.

The maintenance of the regained crude price during the past 14 months, despite the failure of the refined market to follow, was a large factor in oil industry recovery this year. Recent developments indicating progress in correcting the situation in the refined market and indications that in many cases crude and refined stocks are nearing the stage where expanded operations will be required to build up reserves are responsible for the plans involving increased expenditures in the coming year.

The persistent failure to discover any new prolific field is frequently commented upon. The increase in allowable production of both crude and gasoline is taken as a significant sign that the days of overproduction are about numbered and that the industry is nearer a new period of expansion than had been thought possible at this time.

General business conditions are reported steadily improving, after the period of hesitancy in the fall and improvement in general business will undoubtedly carry domestic consumption of gasoline to a new peak during the new year.

The current issue of the review of business compiled by the Department of Commerce shows the distribution of petroleum maintaining the lead over the composite index of general business that it has held throughout the past four years. The figures for the first week in December were 78.8 for general business; 14.9 for automobiles; 72.6 for bituminous coal; 101.1 for electric power; 30.5 for lumber and 113.9 for petroleum.

With the tide of business rising the petroleum industry, being nearest normal in volume of demand, is exceptionally placed to lead the procession. The plans of the industry for the coming year prove that it is prepared to maintain that lead by making whatever expenditures are necessary in anticipation of the increasing demand to come with full national recovery.

The refining industry has had its lesson in overproduction, which the producing industry had already learned. There should be little danger of refiners overshooting the mark again. Their attention should rather be given to strengthening their position, to seeing that the practices and abuses which have delayed recovery in the refined market are eliminated and returns rather than volume substituted as the aim of their operations.

East Texas has been a laboratory for demonstration of the weaknesses in the refining and marketing field. It has exposed the folly of many of the mistaken aims that have held back recovery in those branches of the industry. It is forcing a saner policy upon the entire industry which will be essential if the industry is to continue to meet the demands of the consuming public. Stabilization and black ink must displace the red if the industry is to find the money for the expansions and replacement recovering business will demand.

Current reports estimate that overproduction in East Texas is being curtailed to around 25,000 barrels daily, a quantity almost insignificant compared to the peak of illegal production in that district. If control of intrastate traffic is made as effective as control of interstate movement Texas should no longer be a depressing influence on the industry. The new state tender law passed by the recent session of the legislature will become effective Tuesday, removing any question which may have existed regarding the present state tender order.

Coupled with this improvement in regulation the reduction of surplus gasoline in East Texas through purchases by major companies had a strengthening effect on the market. Elsewhere the price wars that have been ravaging the market are reported to be in process of elimination and there is growing confidence that this suicidal form of competition can be checked.

The public has no conception of the tremendous investment needed to maintain the supply of petroleum products. Announcement this week that the steel industry plans a $100,000,000 program of new equipment as "a blow at the depression" is featured in the newspapers all over the country. The fact that the oil industry will return in the new year to its normal expenditure of $500,000,000 for drilling wells and reconditioning pipe lines, with $170,000 more to be spent on refinery expansion and replacements is of much greater importance as a factor in the national recovery.

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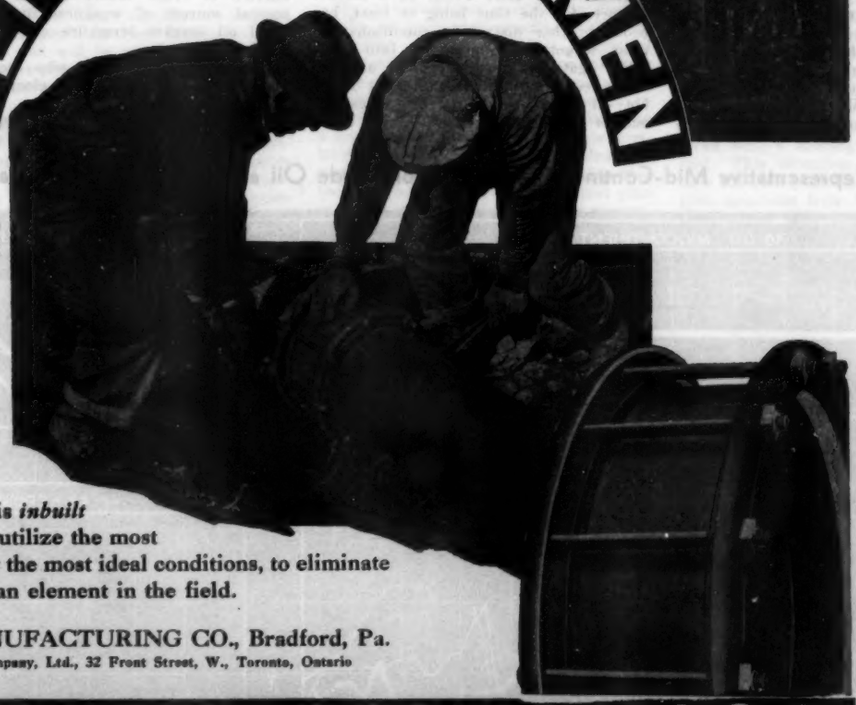
BEHIND THESE MEN



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DRESSER COUPLINGS

Natural Gasoline the Brightest Star in Group 3 Market, With Motor Fuel Still Dragging

By T. F. SMILEY

Natural gasoline continued this week to glisten as the bright particular star in the Oklahoma (Group 3) market firmament. Far from showing signs of waning, it was gathering new strength which seemed likely to extend its already prolonged peak season not only through December, but on into the new year.

Inquiries for two cargoes of 20-pound natural for early February lifting helped to tighten the market still further this week. If these inquiries are translated into orders, there is every reason for expecting the present buoyancy to continue till they are filled, particularly in view of the depleted state of stocks on the Gulf Coast, which means that any fresh demands will have to be met from the interior.

Natural Gasoline Facilities Taxed

Weather conditions and the increasing insistence of car owners for higher volatility have combined to create a lusty demand which has taxed the facilities of natural gasoline manufacturers. Prices were up about an eighth throughout most of the grades.

Gasoline gave no sign of recovery from the anemic condition which has afflicted it for weeks. If there was faintly improved jobber inquiry it was largely because of exhausted stocks and not because of freshened interest in the market. Although the normal course of December's market sees a slackening at this period, with quickened buying late in the month, the underlying reasons for the present lassitude are not related to seasonal requirements or jobber strategy.

East Texas was held up so long as the chief malefactor in wrecking the motor fuel market that little attention came to be paid to other evils. Right at this juncture there is reported to be virtually nothing but cracked gasoline available in East Texas as the result of plant shutdowns, Federal and State tender board restrictions and recent heavy buying by two large companies which cleaned up practically all stocks of legal gasoline in that area. This thorough combing which might be expected to exert a marked quickening effect, did not create a ripple in the general motor fuel market and prices continued to sag.

No Hot Oil Menace, But Market Sick

Removal of East Texas as a market menace, for the time being at least, has brought other disturbing conditions, almost forgotten temporarily, into clear relief again. It commonly was asserted up to recent weeks that with East Texas hot oil eliminated a stabilized gasoline market would be established almost automatically. Well, for practical purposes hot oil has been eliminated; but the gasoline market, instead of gaining health and activity, is found to be suffering from diseases which will require deep-going surgery. The diseases were there all the time, but they were lost sight of in the excitement over East Texas.

It is recognized that search for all the causes of market disorders will have to go back farther than the marketing division and the refinery. It will have to go back to laws governing the production of crude before certain fundamental sources of weakness in the refined oil market structure can be isolated and cured.

But that is no reason why the marketing division should delay cleaning up its own back yard.

Men who have been in the sales division of the oil industry for many years declare there can be no permanent recovery in the gasoline market till the practice of selling at cost or less in order to fatten gallonage has been stopped and until the controversy over prices charged for unbranded gasoline at independent filling stations has been settled positively and finally.

Many considerations enter into these problems, the latter of which is a particularly prolific source of disastrous price wars. Observers declare that failure of oil executives to remove both of them as disorganizing influences is providing advocates of government control with one more argument.

The Gulf Refining Co. and the Humble Oil & Refining Co. scoured the East Texas area in the last week and left it with empty storage tanks. The Gulf was said to have confined its purchases to 400 endpoint material. The Humble's purchases were said to have ranged from 375 to 430 endpoint, and according to current report it paid 3½ cents regardless of grade. In both cases the material was said to be wanted for reforming to get the higher octane and lighter fractions for stock to be blended into premium motor fuels which both companies are putting on the market.

Strength of Naturals Reflected

These purchases are pointed to as reflecting the strength of the natural gasoline market. Standard of New Jersey interests are said to have bought several hundred thousand barrels of low vapor pressure natural during the last few months for use in the building of premium motor fuels.

Although jobbers were paying about 3⅜ cents early this week for low octane

(Continued on Page 31)

Refined Oil Market Barometer

Dullness in gasoline market attributed to let-up in jobber buying which ordinarily appears in mid-December, along with depressing influences growing out of long-endured retail marketing practices. Pick-up looked for in last days of month. Natural gasoline extending its active season far beyond point expected by manufacturers themselves. Furnace oils and kerosene continue strong. Lubricants easing off.

Mid-Continent—Gasoline weak. Naturals unusually strong. Burning oils firm. Lubricants less firm.

East Coast—Gasoline market confusing, with improvement believed probable. Industrial fuels strong. Wax slow.

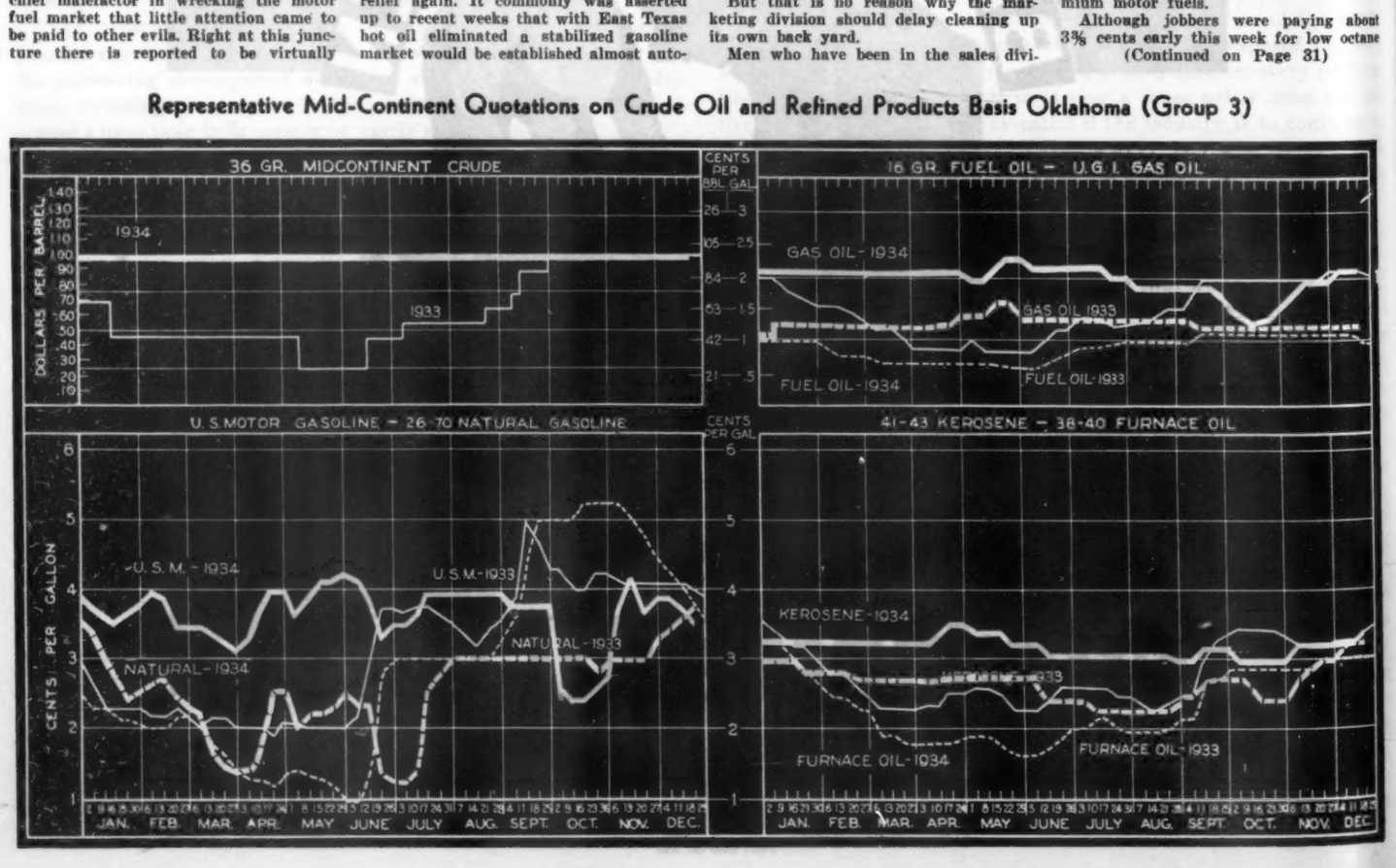
Gulf Coast—General market dull. Kerosene firm.

Pennsylvania—Market soft, but prices holding. Little new business, as jobbers are depleting stocks for January inventory.

California—Market stable, with prices unchanged. Rain has reduced gasoline demand.

Chicago—Gasoline still soft, with consumption seasonally affected. Heating oils firm.

Representative Mid-Continent Quotations on Crude Oil and Refined Products Basis Oklahoma (Group 3)



Stronger Retail Market on East Coast Leads to Optimism Regarding Refined Oil Prices

By C. O. WILLSON
New York Bureau, The Oil and Gas Journal

NEW YORK, Dec. 17.—Although developments in the eastern gasoline market were somewhat mixed over the past week those in close touch with conditions were inclined to the belief that the favorable changes more than offset the unfavorable with indications pointing to additional improvements before the end of the year.

Aside from the gasoline situation, kerosene continues strong and the first cold spell of the season brought the expected consumer demand for furnace oils and other heating oils. Even the heavier industrial and marine fuels presented a better appearance although prices on these products were generally unchanged. In the belief that the prolonged decline in steam refined stocks and bright stock has run its course, a few sellers have advanced their quotations on both domestic and export shipments with prediction that this market will also show some improvement after the first of the year.

On the upside of the gasoline market the outstanding development of the week was the return to normal price levels in northern New Jersey after a period of several weeks in which the net retail quotations were practically the same as the bulk prices at the refineries and water terminals. In the return to the normal retail schedules the tank car quotations for New Jersey delivery led by an independent jobber, were also advanced three-fourths cents per gallon. The new tank car prices at coastal points for New Jersey delivery were 6¼ cents for the middle octane material and 6½ cents for 65 octane and above.

New York Prices Lower

It had been anticipated that these new tank car schedules would also be made effective in the New York Harbor area for New York delivery with similar advances at distributing points along the New England Coast. The disturbance in the metropolitan New York retail gasoline market probably accounts for the failure to advance these tank car quotations last week. It has been predicted for several weeks that unless the New Jersey war was ended soon it would spread across the Hudson to Greater New York. It is a sad commentary on price wars in general that just as one war was ended another breaks out in an adjoining section where approximately 5 per cent of the gasoline in the United States is consumed. There were price disturbances in part of metropolitan New York early in the month but last week it spread and in two general declines retail prices were reduced 1½ cents per gallon and in Queens and Brooklyn the retail prices were 3½ cents below normal. The collapse in the largest gasoline consuming center comes after a summer and fall in which retail prices were maintained despite reductions in practically all the surrounding territory. As the week closed important marketing interests were hopeful that with the New Jersey competition eliminated the New York City situation could be remedied in the near future.

Victory for Major Distributors

On the whole the return to normal prices in northern New Jersey was interpreted as a victory for the major distributors although there were concessions on both sides. As the situation now stands the differentials between the regular products of the major and independent companies with the third or "competitive" grade dropped by practically all of the major companies. The majors won in their refusal to accept a 1½-cent differential insisted upon by the independents in the early negotiations. With the 1-cent differential the independents no longer have the competition of a third grade selling at one-half or more cents under the regular grades.

Most of the major distributors dropped the third grade in New Jersey without regrets and will be glad to do the same in other states. Selling a third grade gasoline has never appealed to many companies as a sound merchandising practice and in most cases the unsoundness included substantial losses to the marketing departments. Accounting departments could usually show that the cost of marketing these third grades was in excess of the regular grades due to the small volume and with lower net prices which were not supported by equally lower costs in the manufacturing end, the entire operation was unsatisfactory to everyone concerned. Thus many companies have dropped the third grades over the past 18 months except at points where exceptional competitive conditions exist.

It is not certain, however, that the settlement of the New Jersey situation is final. At least three major companies are continuing the third grade although they have agreed temporarily to advance prices to the regular grade levels. It is said that in the case of these companies their third grade business represents a substantial fraction of their total gallonage in the New Jersey marketing territory. The test here will be whether the gain in their regular grade business will offset the loss in the third grade gallonage.

The other "if" in the settlement applies to the position of the independent jobbing interests whose gasoline products are being sold 1 cent under the regular branded products of the large companies. In some quarters a doubt is expressed as to whether many of these companies can maintain their gallonage selling with only a 1-cent differential under the better known products of the major companies. If some of them lose gallonage it is assumed they will resort to price cutting and general price troubles may again develop. As to these possible difficulties many of the trade stress the strength or weakness in the tank car prices as the most important factor determining whether normal prices can be maintained indefinitely. These refinery prices so far as this territory is concerned have held up remarkably well in recent weeks with favorable indications for the immediate future.

Major distributors continue to discuss details of marketing practices and it is said that a plan has been suggested which will be acted upon after the first of the year. So far as known no action has been taken by the Government in regard to a tentative plant submitted by a group of major companies in this territory earlier in the month. This plan suggested certain rules in regard to discounts and contracts in line with a general plan to standardize practices covering marketing agreements between refiners, jobbers, dealers and consumers. Plans which have been adopted or are under consideration in other sections are being studied here as to their possible application.

Refinery Situation

The following table summarizes the refinery situation for this territory based on the latest reports of the Bureau of Mines:

EAST COAST REFINERY OPERATIONS
(Data in barrels)

	Oct., 1934	Oct., 1933	Sept., 1934
Production			
Crude to stills	14,654,000	14,239,000	13,529,000
Gasoline	5,998,000	6,179,000	5,421,000
Kerosene	935,000	773,000	761,000
Gas oil and distillate	1,606,000	1,389,000	1,598,000
Residual oils	3,675,000	4,016,000	3,604,000
Lub oils	638,000	597,000	598,000
Wax (lbs.)	17,920,000	21,000,000	15,680,000
Coke (tons)	11,400	14,800	10,800
Asphalt (tons)	133,800	106,600	124,200
Road oils	45,000	51,000	36,000
Stocks End of Month			
Gasoline*	12,748,000	14,165,000	13,942,000
Kerosene	2,125,000	2,144,000	1,981,000
Gas oil and distillate	6,850,000	5,251,000	6,376,000
Lub oils	2,128,000	2,086,000	2,191,000
Residual oils	5,180,000	4,457,000	5,344,000
Wax (lbs.)	52,922,000	19,330,000	52,261,000
Coke (tons)	28,400	49,000	30,800
Asphalt (tons)	93,600	75,500	104,400
Road oils	47,000	116,000	47,000

*At refineries, bulk stations and pipe lines.

From the production end, the Government reports show that October crude runs to stills and gasoline output were about the same as October, 1933. Production of kerosene, gas oil and distillate increased materially with a decline in residual oils. Production of lubricating oils was greater with a decline in wax output.

In the stock end, inventories of gasoline on October 31 were less than on the same date in 1933 with gains in gas oil and distillate, lubricating oil and wax. Kerosene stocks on that date were practically the same as last year. It will be noted that stocks of residual oils on October 31 were 90 per cent greater than in October, 1933, when this territory was faced with a shortage of heavy oils for fuel. This situation has been changed over the past year by supplementing supplies available from local refineries and Gulf Coast with large shipments from California.

Wax continues to move slowly in this territory with stocks at refineries almost tripled over the past year.

Prices

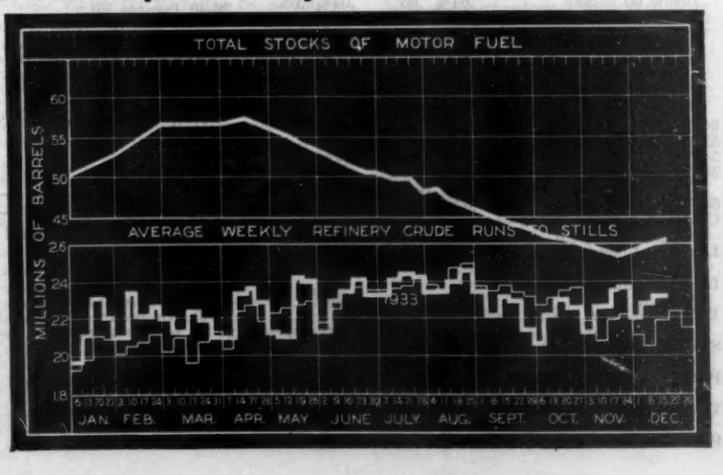
Most companies are quoting kerosene along the Atlantic seaboard at 5¾ cents.

(Continued on Page 35)

American Petroleum Institute Weekly Refinery Statistics

Week Ending December 15, 1934

	Capacity reporting per cent	Daily crude runs (bbls.)	Finished motor fuel (bbls.)	Gas oil and fuel oil (bbls.)
East Coast	100.0	438,000	11,343,000	14,050,000
Appalachian	93.3	99,000	1,758,000	1,544,000
Indiana, Illinois, Kentucky	94.6	314,000	6,827,000	5,357,000
Oklahoma, Kansas, Missouri	83.7	250,000	3,865,000	3,885,000
Inland Texas	47.6	93,000	1,162,000	1,720,000
Texas Gulf	97.5	502,000	4,634,000	10,508,000
Louisiana Gulf	96.4	121,000	954,000	4,413,000
North Louisiana and Arkansas	83.7	40,000	262,000	543,000
Rocky Mountain	66.7	41,000	558,000	757,000
California	96.9	428,000	10,402,000	68,459,000
Total United States	89.7	2,326,000	41,760,000	111,236,000



REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement except as otherwise noted

The following quotations are exclusive of the Federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasolines

OKLAHOMA (Group 3)—	Dec. 18		Dec. 11	
U. S. Motor grades:				
Below 63 octane	.03½	.03¾	.03¾	.04
63-70 octane	.04⅜	.04⅝	.04½	.04¾
60-62 400 grades:				
Below 63 octane	.03½	.03¾	.03¾	.04
63-70 octane	.04⅜	.04⅝	.04½	.04¾
64-66 375	.04	.04¼	.04	.04¼
68-70 360	.04¼	.04⅜	.04¼	.04⅜
NORTH TEXAS—				
U. S. Motor grades:				
Below 63 octane	.03½	.03¾	.03¾	.04
63-70 octane	.04¼	.04½	.04½	.04¾
60-62 400	.03½	.03¾	.03¾	.04
64-66 375	.03¾	.04	.03¾	.04
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
U. S. Motor grades:				
Below 63 octane	.04⅛	.04¼	.04¼	.04½
63-70 octane	.05	.05¼	.05	.05¼
60-62 400	.04¼	.04½	.04¼	.04½
68-70 360	.05	.05¼	.05	.05¼
ARKANSAS (Ark., N. La. & Miss. del.)—				
U. S. Motor grades:				
Below 63 octane	.04⅛	.04¼	.04¼	.04½
63-70 octane	.05	.05¼	.05	.05¼
CHICAGO (based on Oklahoma Group 3)—				
U. S. Motor grades:				
Below 63 octane	.03½	.03¾	.03¾	.04
63-70 octane	.04½	.04¾	.04½	.04¾
60-62 400	.03½	.03¾	.03¾	.04
64-66 375	.04	.04¼	.04	.04¼
68-70 360	.04¼	.04½	.04¼	.04½
Aviation fighting grade	.04⅞	.05	.04⅞	.05
PENNSYLVANIA (inland refineries)—				
58-60 U. S. Motor:				
Below 60 octane	.04¾	.04⅞	.04⅞	.05
60-64.9 octane	.05⅞	.06⅛	.06	.06¼
65-70 octane	.06¼	.06⅞	.06⅜	.07
68-70 350	.06⅛	.06¼	.06⅛	.06¼
CALIFORNIA (domestic movement)—				
54-58 U. S. Motor	.07	.08	.07	.08
58-60 400	.08	.09	.08	.09
EAST COAST—				
U. S. Motor, below 60 octane:				
*New York	.05¼		.05¼	
Baltimore	.05¼		.05¼	
U. S. Motor, 60-64 octane:				
*New York (Bayonne)	†.05½		.05½	
Philadelphia	.05½		.05½	
Boston	.05½		.05½	
Baltimore	.05½		.05½	
Charleston, S. C.	.05½		.05½	
U. S. Motor, 65 and above:				
*New York	‡.05¾		.05¾	
Philadelphia	.05¾		.05¾	
Boston	.05¾	.06	.05¾	.06
Baltimore	.05¾		.05¾	
Charleston, S. C.	.05¾		.05¾	

*All grades of gasoline one-fourth cent less for small barge shipments.
†For New Jersey delivery, 6¼ cents.
‡For New Jersey delivery, 6½ cents.

GULF COAST (domestic)—				
U. S. Motor:				
Below 60 octane	.04¾	.05	.04¾	.05
60-64.9 octane	.05	.05¼	.05	.05¼
65 octane and higher	.05¼		.05¼	

Naphthas

	Dec. 18		Dec. 11	
PENNSYLVANIA (inland refineries)—				
50-52 (blending)	.04¾	.04⅞	.04¾	
52-54 450 (blending)	.04¾	.04⅞	.04¾	
54-56 450 (blending)	.04¾	.04⅞	.04¾	
50-52 450 (blending)	.04¾	.04⅞	.04¾	
CHICAGO (based on Oklahoma Group 3)—				
50-52 450 (blending)	.03¾	.04	.03¾	.04
Cleaners' naphtha, 56-58 gr., 200 i.b.p., 320 e.p.	.06¾	.07	.06¾	.07
Lacquer diluent, 180 i.b.p., 250 e.p.	.07¾	.08	.08¾	.09
Lacquer diluent, 140 i.b.p., 200 e.p.	.08¾	.09	.06¾	.07
Rubber solvent, 68-70 gr., 100 i.b.p., 300 e.p.	.06¾	.07	.06¾	.07
Stoddard solvent, 300 i.b.p., 410 e.p., over 83° flash	.06¼	.06½	.06¼	.06½
Pet. thinner, 290-300 i.b.p., 415 e.p., over 83° flash	.06¼	.06½	.06¼	.06½
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p., 330 e.p.	.06¾	.07	.06¾	.07
Petroleum spirits	.05¾	.06	.05¾	.06

Natural Gasolines

OKLAHOMA (Group 3)—	Dec. 18		Dec. 11	
Grade 26-70	.03⅜		.03⅝	.03¾
Grade 18-55	.04⅜	.04½	.04¼	.04⅜
Low vapor pressure grades:				
*14 lb. v.p. (max.)	.05	.05⅛	.04¾	.05
*12 lb. v.p. (max.)	.05¼	.05½	.05	.05¼
NORTH TEXAS—				
Grade 26-70	.03½		.03⅜	.03½
Grade 18-55	.04¼	.04⅜	.04	.04¼
Low vapor pressure grades:				
*14 lb. v.p. (max.)	.04⅝	.04¾	.04½	.04¾
*12 lb. v.p. (max.)	.04¾	.05	.04¾	.05
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
Grade 26-70	.04	.04⅛	.04	
CALIFORNIA—				
75-85 375	.06½	.06¾	.06½	.06¾

*Prices nominal, virtually no spot market.

Kerosenes

(All kerosenes water white)

OKLAHOMA (Group 3)—	Dec. 18		Dec. 11	
41-43	.03⅜	.03½	.03¼	.03½
42-44	.03½	.03⅝	.03⅜	.03½
NORTH TEXAS—				
40-41	.03⅛	.03¼	.03	.03⅛
41-43	.03⅜	.03½	.03¼	.03⅜
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
41-43	.03⅜		.03⅜	
ARKANSAS (Ark., N. La. & Miss. del.)—				
41-43	.03⅜	.03½	.03⅜	.03½
PENNSYLVANIA (inland refineries)—				
45	.04⅜	.04½	.04⅜	.04½
46	.04½	.04⅝	.04½	.04⅝
47	.04⅝	.04¾	.04⅝	.04¾
CHICAGO (based on Oklahoma Group 3)—				
41-43	.03⅜	.03½	.03½	.03½
42-44	.03½	.03⅝	.03½	.03⅝
CALIFORNIA (Pacific Coast consumption)—				
38-40 high burning test	.04¾	.05¼	.04¾	.05¼
NEW YORK (Bayonne, N. J.)—				
41-43	.05⅝	.05¾	.05½	.05¾
GULF COAST (domestic)—				
41-43	.04½	.04⅝	.04½	.04⅝

Petroleum Coke

(Prices per ton f.o.b. refineries in Chicago area)
(Refineries will absorb freight to 80 cents a ton)

	Dec. 18	Dec. 11
Still run	6.00	6.00
Direct from still	7.00	7.00
Egg, nut, pea	8.25	8.25
Lump	8.25	8.25

Furnace Oils and Tractor Fuels

(Zero cold test under 190° flash and good odor)

OKLAHOMA (Group 3)—	Dec. 18		Dec. 11	
32-36 straw	.03⅛	.03¼	.03⅛	.03¼
36-38 straw	.03⅛	.03¼	.03⅛	.03¼
38-40 straw	.03¼	.03⅜	.03¼	.03⅜
38-40 prime white	.03⅜	.03½	.03⅜	.03½
NORTH TEXAS—				
38-40 straw	.03¼	.03⅜	.03¼	.03⅜
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
36-40 furnace oil	.03⅜	.03¼	.03⅜	.03¼
ARKANSAS (Ark., N. La. & Miss. del.)—				
32-36 furnace oil	.03⅛	.03¼	.03⅛	.03¼
CHICAGO (based on Oklahoma Group 3)—				
32-36 straw	.03¼	.03⅜	.03⅛	.03¼
38-40 straw	.03¼	.03⅜	.03⅛	.03¼
38-40 prime white	.03⅜	.03½	.03¼	.03⅜
NEW YORK (Bayonne, N. J.)—				
No. 1	.05½	.05¾	.05½	.05¾
No. 2	.04¾		.04¾	
No. 4	.04¼		.04¼	

Gas Oil, Diesel Oil and Fuel Oil

(Gas oil per gal., Diesel and fuel oils per bbl.)

OKLAHOMA (Group 3)—	Dec. 18		Dec. 11	
32-36 gas oil cracking stock	.02⅛	.02¼	.02⅛	.02¼
U.G.I. gas oil	.02⅛	.02¼	.02⅛	.02¼
32-36, zero to 15 gas oil	.02¾	.02⅞	.02⅝	.02⅞
28-30, No. 3 burner oil	1.10	1.15	1.10	1.15
26-30, zero to 10 fuel oil	.95	1.00	.95	1.00
24-26 fuel oil	.77½	.80	.77½	.80
20-22 fuel oil	.72½	.75	.72½	.75
Below 16 fuel oil	.60	.62½	.60	.62½
NORTH TEXAS—				
32-36 gas oil, industrial	.02⅛	.02¼	.02⅛	.02¼
22-26 fuel oil	.67½	.70	.67½	.70
Below 20 fuel oil	.60	.62½	.60	.62½
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
20-32 gas oil, zero	.03⅛	.03¼	.03	.03⅛
14-16 fuel oil	.70	.75	.70	.75
ARKANSAS (Ark., N. La. & Miss. del.)—				
30-32 gas oil, zero	.03⅛	.03¼	.03	.03⅛
32-36 gas oil	.03	.03⅜	.03	.03¼
14-16 fuel oil	.70	.75	.70	.75
CHICAGO (based on Oklahoma Group 3)—				
32-36 gas oil, industrial	.02	.02¼	.02	.02¼
28-30 zero to 10, fuel oil	1.00	1.05	.97½	1.02½
26-28 zero to 10, fuel oil	.90	.92½	.87½	.90
22-26 zero to 10, fuel oil	.80	.82½	.77½	.80
18-22 zero to 10, fuel oil	.67½	.70	.67½	.70
Below 18 fuel oil	.57½	.62½	.57½	.62½

Note: Fuel oils of more than 40 cold test generally 5 to 15 cents per barrel in all these areas.

PENNSYLVANIA (inland refineries)—				
36-40	.03½	.03¾	.03½	.03¾
CALIFORNIA—				
Los Angeles:				
30-34 gas oil per bbl.	1.10	1.26	1.10	1.26
27 plus Diesel	1.10	1.15	1.10	1.15
27 plus Diesel (bunkers)	1.13	1.20	1.13	1.20
12-16 (bunkers at tidewater)	.82½	.85	.82½	.85
10-16 (cargo lots)	.66	.75	.66	.75
12-17 (tank cars)	.60	.80	.60	.80
San Joaquin Valley:				
10-18 (tank cars)	.55	.70	.55	.70
San Francisco:				
27 plus Diesel per bbl.	1.15	1.25	1.15	1.25
27 plus Diesel (bunkers)	1.19		1.19	
10-16 (bunkers)	.89		.89	
GULF COAST—				
28-30 gas oil	.03½	.03⅝	.03½	.03⅝
28-30 Diesel (bunkers)	1.70		1.70	
Bunker C (bulk cargoes)	.85	.90	.85	.90
Bunker C (bunkers)	.95	1.00	.95	1.00
NEW YORK (Bayonne, N. J.)—				
27 plus, gas oil	.04½	.04¾	.04½	.04¾
28-30, Diesel (lighterage 6½ cents per bbl.)	1.89		1.89	
28-30 Diesel (tank cars)	.04¾		.04¾	
*Bunker C (to ocean-going ships in N. Y. harbor)	1.15		1.15	

*Lighterage charge 5 cents per barrel additional.

Neutral Oils

(Vis. at 100° F. except Pennsylvania, and color N.P.A.)

OKLAHOMA (Group 3)—	Dec. 18		Dec. 11	
Zero to 10 Cold Test:				
150-3	.10		.10	
180-3	.11¼		.11¼	
180-4	.10¾		.10¾	
200-3	.11¾		.11¾	
200-4	.11¼		.11¼	
240-3	.13¾		.13¾	
240-4	.13¼		.13¼	
280-3	.14¾		.14¾	
280-4	.14		.14	
300-3½	.15¼		.15¼	
400-4	.17¼		.17¼	
100-2 paraffin oil	.05¾		.05¾	
15-20 Cold Test:				
200-3	.10¾		.10¾	
200-4	.10¼		.10¼	
240-3	.12¾		.12¾	
240-4	.12¼		.12¼	
280-3	.13¾		.13¾	
280-4	.13		.13	
GULF COAST—				
Pale Oils:				
200-3	.07¼	.07½	.07¼	.07½
300-3	.07½	.08	.07½	.08
500-3½	.08½	.09	.08½	.09
750-3½	.09	.09¼	.09	.09¼
1,200-3½	.09½	.09¾	.09½	.09¾
2,000-4	.09¾	.10	.09¾	.10
Red Oils:				
200-5-6	.07	.07½	.07	.07¼
300-5-6	.07¼	.07½	.07¼	.07½
500-5-6	.08	.08½	.08	.08½
750	.08½	.09	.08½	.09
1,200-5-6	.09¼	.09½	.09¼	.09½
CALIFORNIA—				
Pale Oils:				
100-2½-3	.12½	.14½	.12½	.14½
200-2½-3	.12½	.14½	.12½	.14½
300-3-3½	.12½	.14½	.12½	.14½
350-3-4	.12½	.14½	.12½	.14½
400-3-4	.12½	.14½	.12½	.14½
450-3-4	.12½	.14½	.12½	.14½
550-3-4	.12½	.14½	.12½	.14½
600-3-4	.12½	.14½	.12½	.14½
Red Oils:				
200-4-5	.12½	.14½	.12½	.14½

300-5-6	.12½	.14½	.12½	.14½
350-5-6	.12½	.14½	.12½	.14½
400-5-6	.12½	.14½	.12½	.14½
450-5-6	.12½	.14½	.12½	.14½
500-5-6	.12½	.14½	.12½	.14½
600-5-6½	.12½	.14½	.12½	.14½
700-6½ plus	.12½	.14½	.12½	.14½
750-6½ plus	.12½	.14½	.12½	.14½
900-6½ plus	.12½	.14½	.12½	.14½
PENNSYLVANIA—				
150 vis. at 70° F., 3 color, 400-405 flash:				
Zero pour test	.24	.24½	.24	.24½
10 pour test	.23	.23½	.23	.23½
15 pour test	.22½	.23	.22½	.23
25 pour test	.22	.22½	.22	.22½
180 vis. at 70° F., 3 color:				
25 pour test	.25	.25½	.25	.25½
200 vis. at 70° F., 3 color:				
Zero pour test	.31	.31½	.31	.31½
10 pour test	.30	.30½	.30	.30½
15 pour test	.29½	.30	.29½	.30
25 pour test	.28	.29	.28	.29

Bright and Steam Refined Stocks

OKLAHOMA (Group 3)—	Dec. 18		Dec. 11	
Bright Stocks:				
190-200 D	.16½		.16½	
150-160 D, 0-10	.13½		.13½	
150-160 D, 10-25	.13		.13	
150-160 24-40	.12½		.12½	
150-160 E	.12½		.12½	
Steam refined:				
630 light green (treated)	.08	.08½	.08	.08½
600 light green (untreated)	.06	.08	.06	.08
600 dark green (untreated)	.04½	.07	.04½	.07
PENNSYLVANIA—				
Bright Stocks (Pennsylvania grade, No. 8 color, 145-50 at 210; 540-550 flash):				
10 pour test	.19½	.20½	.19½	.20½
15 pour test	.18½	.19½	.18½	.19½
20 pour test	.18	.20	.18	.20
25 pour test	.15½	.16½	.15½	.16½
Steam refined:				
600	.09	.10	.09	.10
650	.12	.13	.12	.13
600 Pennsylvania flash	.13	.14	.13	.14
630 flash	.17	.18	.17	.18
600 Warren E filtered	.13	.14	.13	.14

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—	Dec. 18		Dec. 11	
124-126 white crude scale	.03⅛	.03¼	.03⅛	.03¼
PENNSYLVANIA—				
122-124	.0325	.0330	.0325	.0330
124-126	.0330	.0335	.0330	.0335
NEW YORK—				
Wax (a.m.p.) in bags fully refined:				
120-122	.0420	.0430	.0420	.0430
123-125	.0440	.0460	.0440	.0460
125-127	.0445	.0470	.0445	.0470
130-132	.05	.0510	.05	.0510
133-135	.0545	.0570	.0545	.0570
135-137	.0570	.0595	.0570	.0595
124-126 crude scale	.0305	.03125	.03⅛	.03¼
Petrolatum in barrels in carload lots:				
Dark green	.01⅞		.01⅞	
Amber	.02⅞	.03	.02⅞	.03
Extra amber	.03	.03⅛	.03	.03⅛
Lily white	.06⅝	.06¾	.06⅝	.06¾
Snow white	.07¾	.07⅞	.07¾	.07⅞
Cream	.05⅝	.05¾	.05⅝	.05¾
CHICAGO (f.o.b. switching district)*				
122-124 wax	.0490	.0500	.0490	.0500
125-127 wax	.0515	.0525	.0515	.0525
127-129 wax	.0530	.0540	.0530	.0540
130-132 wax	.0590	.0600	.0590	.0600
132-134 wax	.0615	.0625	.0615	.0625

*Cents per pound on carlot orders in burlap bags of 225 lbs. approx. Add 3° F. a.m.p.

Export Prices

GASOLINE

GULF COAST—	Dec. 18		Dec. 11	
U. S. Motor	.04⅛	.04¼	.04⅛	.04¼
60-62 400	.04¼	.04⅜	.04¼	.04⅜
61-63 390	.04½	.04⅝	.04½	.04⅝
64-66 375	.04¾	.04⅞	.04¾	.04⅞
LOS ANGELES, CALIF.—				
U. S. Motor grades:				
53-55 octane	.04	.04¼	.04	.04¼
55-65 octane	.04¼	.04½	.04¼	.04½
65-67 octane	.04½	.04¾	.04½	.04¾
67-69 octane	.04¾	.05	.04¾	.05
Above 69 octane	.05	.05¼	.05	.05¼
58-60 400 endpoint	.04¾	.05½	.04¾	.05½

KEROSENE

GULF COAST—				
41-43 prime white	.04¼	.04⅝	.04	.04⅛
41-43 water white	.04½	.04⅝	.04⅛	.04¼
44 water white	.04¾		.04¼	.04½
LOS ANGELES, CALIF.—				
41-43 water white	.04½	.04¾	.04½	.04¾

LUBRICANTS

NEW YORK (f.a.s. in bbls.)—				
Cylinder Stocks:				
600 Warren E	.19	.20	.19	.20
600 S.R. unfiltered	.14½	.15	.14	.14½
650 S.R. unfiltered	.17	.18	.17	.17½
600 flash S.R.	.18	.18½	.18	.18½
630 flash S.R.	.22½	.23	.22	.22½
Bright Stocks:				
8 color	.22½	.23	.22	.23
6½ plus color, in dilution	.21	.21½	.21	.21½

NEUTRAL OILS

200-3 color	.34½	.35	.34½	.35
150-3 color	.28	.29	.27½	.28

PARAFFIN WAX (Fully Refined)

NEW YORK (prices per pound):				
120-122 a.m.p.	.0405	.0425	.0405	.0425
123-125 a.m.p.	.0435	.0455	.0435	.0455
125-127 a.m.p.	.0440	.0465	.0440	.0465
128-130 a.m.p.	.04¾	.0490	.04¾	.0490
130-132 a.m.p.	.0495	.0505	.0495	.0505
133-135 a.m.p.	.0540	.0565	.0540	.0565
135-137 a.m.p.	.0565	.0590	.0565	.0590

Crude Oil Gravity Table

Gravity—	Oklahoma and Kansas 1	North Texas, Central Texas and East Central Texas 2	North Louisiana and Arkansas 3	Gray County, Texas 4	Carson, Hutchinson and Moore Counties, Texas 5	Conroe, Texas 6	Salt Creek, Wyo. 7	Gulf Coast, Texas and Louisiana 8	Gulf Coast, Texas and Louisiana 9	Cotton Valley, Louisiana 10
Below 20	....	....	....	....	....	....	....	$.82	$.82	....
20-20.9	....	....	....	....	....	....	....	.84	.84	....
21-21.9	....	....	....	....	....	....	....	.86	.86	....
22-22.9	....	....	....	....	....	....	....	.88	.88	....
23-23.9	....	....	....	....	....	....	....	.90	.90	....
24-24.9	....	....	....	....	....	....	....	.92	.92	....
Below 25	*$.76	....	....	....	....	....	....	....	....	$.70
25-25.9	*.78	....	....	....	....	....	....	.94	.94	.72
26-26.9	*.80	....	....	....	....	....	....	.96	.96	.74
27-27.9	*.82	....	....	....	....	....	....	.98	.98	.76
28-28.9	*.84	....	....	....	....	....	....	1.00	1.00	.78
Below 29	.84	$.79	$.79	....	....	....	$.84	....	....	....
29-29.9	.86	.81	.81	....	....	....	.86	1.02	1.02	.80
30-30.9	.88	.83	.83	....	....	....	.88	1.04	1.04	.82
31-31.9	.90	.85	.85	....	....	....	.90	1.06	1.05	.84
32-32.9	.92	.87	.87	....	....	....	.92	1.08	1.06	.86
33-33.9	.94	.89	.89	....	....	....	.94	1.10	1.07	.88
34-34.9	.96	.91	.91	....	....	....	.96	1.12	1.08	.90
Below 35	....	....	....	$.79	$.69	....	....	....	....	....
35-35.9	.98	.93	.93	.81	.71	$1.09	.98	1.12	1.09	.92
36-36.9	1.00	.95	.95	.83	.73	1.11	1.00	1.12	1.10	.94
37-37.9	1.02	.97	.97	.85	.75	1.13	1.02	1.12	1.11	.96
38-38.9	1.04	.99	.99	.87	.77	1.15	1.04	1.12	1.12	.98
39-39.9	1.06	1.01	1.01	.89	.79	1.17	1.06	1.12	1.13	1.00
40 and over	1.08	1.03	1.03	.91	.81	1.19	1.08	1.12	1.14	1.02

Effective December 2, Panhandle Refining Co., purchasing oil in North Texas, posted below 29 degrees, 68 cents; 29-29.9 degrees, 70 cents, with 2 cents added for each additional degree up to 40 and over, at 92 cents.

*The following companies purchasing crude oil in Kansas or Oklahoma, or both, begin their price schedule: Below 25°, 76 cents; 25-25.9°, 78 cents, with 2 cents added for each degree upward to 40 and over at $1.08; Carter Oil Co., Magnolia Petroleum Co., Pure Oil Co., Rock Island Refining Co., Shell Petroleum Corp., Sinclair Prairie Oil Marketing Co., Skelly Oil Co., and Wilcox Oil & Gas Co. All others begin their schedules at below 29°, 84 cents, excepting Phiitex Oil Co., which begins with below 31° at 88 cents.

Column 1—Effective September 29, Texas Co. of Oklahoma; Stanolind Crude Oil Purchasing Co. in Kansas and Oklahoma; Anderson & Prichard, Inc., in Oklahoma; Bell Oil & Gas Co. in Oklahoma; Carter Oil Co. in Oklahoma and Kansas; Deep Rock Oil Co. in Oklahoma; Derby Oil Co. in Kansas; Globe Refining Co. in Oklahoma; Golden Rule Refining Co. in Kansas; Gypsy Oil Co. in Oklahoma and Kansas; Kanotex Refining Co. in Kansas; Magnolia Petroleum Co. in Oklahoma; Mid-Continent Petroleum Corp. in Oklahoma; National Refining Co. in Kansas and Oklahoma; Shell Petroleum Corp. in Kansas and Oklahoma; Sinclair Prairie Oil Marketing Co. in Kansas and Oklahoma; Texas Co. in Oklahoma; Tide Water Oil Co. in Oklahoma; Vickers Refining Co. in Kansas; Continental Oil Co. in Kansas and Oklahoma; Empire Pipe Line Co. in Oklahoma and Kansas; Phiitex Oil Co. in Kansas and Oklahoma; Pure Oil Co. in Oklahoma; Skelly Oil Co. in Kansas. Effective September 29, by White Eagle Oil Corp. in Kansas; October 1 by Barnsdall Refineries, Inc., in Oklahoma.

Column 2—Effective September 29, by Texas Co., Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Sinclair Prairie Oil Marketing Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Bell Oil & Gas Co., Continental Oil Co. Effective September 29, in the Van Pool, Van Zandt County, Pure Oil Co. posted below 29°, 84 cents, with 2 cents added for each degree up to 40 and over at $1.08.

Column 3—Effective September 29, by Texas Co., Magnolia Petroleum Co., Gulf Refining Co. Effective December 22, Stanolind Oil & Gas Co. in Pine Island, Louisiana, and Marion County, Texas, posted below 29°, 79 cents, with 2 cents added for each degree up to 40 and over at $1.03. Effective March 17, 1934, by Standard Oil Co. of Louisiana and Louisiana Oil Refining Co. Starting with below 25°, 71 cents, adding 2 cents for each degree upward to 40 and over at $1.03.

Column 4—Effective September 29, by Texas Co., Humble Oil & Refining Co., Magnolia Petroleum Co., Sinclair Prairie Oil Marketing Co., and H. F. Wilcox Oil & Gas Co. On same day Phiitex Oil Co. posted below 31°, 71 cents, with 2 cents added for each degree up to 40 and over at 91 cents. Effective June 1, 1934, Texas Co. (see note above).

Column 5—Effective September 29, by Texas Co., Humble Oil & Refining Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Wilcox Oil & Gas Co., Continental Oil Co. On same day, Phiitex Oil Co. posted below 31°, 61 cents, with 2 cents added for each degree upward to 40 and over at 81 cents. Effective June 1, 1934, Texas Co. (see note above).

Column 6—Effective September 29, by Humble Oil & Refining Co. and Tide Water Oil Co., and on September 30, by Texas Co., which on September 29 had posted a schedule of $1.07 to $1.12 with a 1-cent spread on each degree.

Column 7—Effective September 29, by Stanolind Oil & Gas Co.

Column 8—Effective September 29, by Humble Oil & Refining Co., Gulf Pipe Line Co., Shell Petroleum Corp., Pure Oil Co., Sinclair Prairie Oil Marketing Co. On October 2, Magnolia Petroleum Co. posted Lockport, Louisiana; 26-26.9°, 84 cents, with 2 cents added for each degree upward to 34 and over at $1.12, and in Cameron Meadows and Iowa, Louisiana; below 20°, 72 cents, with 2 cents added for each degree up to 34 and over at $1.02. These prices were 2 cents higher on each degree than Magnolia prices posted on September 29. Effective September 29, Shell Petroleum Corp. posted in Iowa, Louisiana, district: Below 20°, 70 cents, with 2 cents added for each degree upward to 34° and over at $1; and in Black Bayou and White Castle, Louisiana: Below 29°, 80 cents, with 2 cents added for each degree upward to 34° and over at $1.10.

Column 9—Effective September 30, Texas Co. (On September 29, Texas Co. had posted a schedule of 2 cents on each degree, but changed it on September 30.)

Column 10—Effective September 30, by Louisiana Oil Refining Co.

(California Crude Oil Prices on Page 38)

Crude Oil Prices

Oklahoma, Kansas, North Central and East Central Texas

East Texas $1.00
Corsicana (heavy) (June 17, 1933)* ..... .80
Other fields ..... (See gravity table)

Note—In East Texas, effective September 29, 1933, by Texas Co., Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Shell Petroleum Corp., Gulf Pipe Line Co., Tide Water Oil Co., Sinclair Prairie Oil Marketing Co., Magnolia Petroleum Co., Sun Oil Co., Panola Pipe Line Co., Empire Oil & Refining Co., and Atlas Pipe Line Co. posted 60 cents per barrel in East Texas, but on November 3 resumed its posted price of $1 per barrel, making it retroactive to October 22.

*Magnolia Petroleum Co.

West Texas

Crane, Upton, Crockett, Howard, Glasscock, Mitchell (Sept. 29, 1933) ..... $.70
Ector, Winkler and Pecos Counties and Lea County, New Mexico (Sept. 29, 1933) ..... .75
Pecos County, Yates shallow Pool (Sept. 29, 1933)* ..... .85
Jones and Fisher Counties*. See gravity table

Note—Effective September 29, 1933, by Humble Oil & Refining Co., Texas Co., Gulf Pipe Line Co., Shell Petroleum Corp., Magnolia Petroleum Co., and by Stanolind Oil & Gas Co. in Winkler County, Texas.

*Shell Petroleum Corp.

Gulf Coast

Grade A and Grade B specifications discontinued by leading buyers. ..... (See gravity table)
Tomball (see note)* $1.15
Livingston (Sept. 29, 1933)† 1.00
Cleveland (Jan. 11, 1934) 1.00
Greta (Sept. 29, 1933) ..... .85
Refugio, light ..... (See gravity table)
Refugio, heavy (Sept. 29, 1933)‡ ..... .85
Markham and High Island ..... (See Gulf Coast gravity table)
Conroe ..... (See Conroe gravity table)
Bosco, La. (Oct. 15, 1934)§ $1.02

Note—Tomball, effective September 29, by Humble Oil & Refining Co. and October 2 by Magnolia Petroleum Co., and November 10 by Stanolind Crude Oil Purchasing Co.

*Greta posted by Texas Co. †Shell Petroleum Corp. ‡Refugio heavy by Humble Oil & Refining Co. Cleveland (Liberty County) posted by Magnolia Petroleum Co. §Bosco posted by Pure Oil Co.

South Central and Southwest Texas

(See note below table)

Darst Creek ..... $.87
Mirando ..... .80
Luling (Sept. 29, 1933) ..... .75
Pettus 1.05
Salt Flat ..... .87
Lytton Springs (Sept. 29, 1933) ..... .95
Duval County (Sept. 29, 1933) ..... .80
Saxet ..... .85

Note—Effective on September 29 by Humble Oil & Refining Co. in Darst Creek, Mirando, Pettus, Salt Flat and Saxet. Effective September 29 in Darst Creek by Gulf Pipe Line Co. and Texas Co. Effective October 2 by Magnolia Petroleum Co. Effective in Pettus and Salt Flat on September 29 by Humble Oil & Refining Co. and Gulf Pipe Line Co. Luling and Lytton Springs by Magnolia Petroleum Co. Duval County by Texas Co. Saxet, effective September 29, by

(Continued on Page 38)

TANK WAGON MARKETS

Quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, include taxes

December 18, 1934

Taxes

The gasoline quotations given in the following tables include the 1-cent Federal tax, as well as state, county and city taxes. The gasoline quoted is the regular or standard grade. In most marketing areas a third grade and a premium grade are also available.

Discounts

Under the standard form of commercial consumer contract which went into effect March 1, 1934, save in California, Oregon, Washington, Arizona and Nevada, a discount of 1 cent a gallon off tank wagon or 3 cents a gallon off retail prices is permitted for purchases running between 4,000 and 10,000 gallons a month, or 4 cents a gallon off retail prices for purchases in lots of more than 10,000 gallons a month. The minimum delivery is 25 gallons.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline: Tank wagon	Service station	Incl'ds tax	Kero. tank wagon
Denver, Colo.	18.0	20.0	5.0	12.5
Pueblo	18.0	20.0	5.0	11.0
Grand Junction	16.5	18.5	5.0	15.0 *
Casper, Wyo.	18.0	20.0	5.0	11.5
Cheyenne	18.0	20.0	5.0	13.0
Butte, Mont.	21.0	23.0	5.0	17.5
Billings	22.5	24.5	6.0	16.5
Helena	23.0	25.0	6.0	17.5
Great Falls	23.0	25.0	6.0	17.5
Salt Lake, Utah	21.0	23.0	5.0	16.0
Boise, Idaho	22.5	24.5	6.0	18.0
Twin Falls	22.5	24.5	6.0	18.0
Albu'que, N. M.	18.0	20.0	*7.0	13.0

*One-cent city tax.

Effective March 1, 1934, discount to dealers with or without contract throughout Continental territotry: Undivided dealer discount off service station price, 4 cents; divided dealer accounts, 2½ cents.

Standard Oil Co. (Indiana)

	Gasoline: Tank wagon	Service station	Incl'ds tax	Kero. tank wagon
Chicago	14.8	14.8	4.0	8.0
Decatur, Ill.	14.4	9.9	4.0	10.2
E. St. Louis	14.1	11.0	4.0	9.5
Joliet	14.5	16.5	4.0	10.2
Peoria	14.7	9.5	4.0	10.2
Quincy	13.9	14.9	4.0	10.0
Davenport, Ia.	14.2	14.0	4.0	10.1
Des Moines	14.1	16.1	4.0	10.1
Mason City	14.4	16.4	4.0	10.1
Sioux City	14.3	16.3	4.0	9.7
Duluth, Minn.	15.0	17.0	4.0	10.4
Mankato	14.7	16.7	4.0	9.5
Minneapolis	15.7	13.4	4.0	10.4
LaCrosse, Wis.	15.7	17.7	4.0	10.8
Green Bay	15.9	17.9	5.0	10.2
Milwaukee	15.8	17.8	5.0	9.0
Madison	16.0	18.0	5.0	9.9
Detroit, Mich.	15.0	17.0	4.0	10.5
Grand Rapids	14.7	16.7	4.0	10.2
Saginaw	15.0	17.0	4.0	10.5
Evansville, Ind.	16 2	14.9	5.0	10.0
Indianapolis	16.1	18.1	5.0	10.2
South Bend	16.4	18.4	5.0	9.0
Fargo, N. Dak.	15.7	17.7	4.0	11.4
Huron, S. Dak.	16.2	18.2	5.0	11.4
Sioux Falls	15.6	17.6	5.0	10.9
Kans. C., Mo.*	13.6	15.6	4.0	7.5
Springfield	13.8	15.8	4.0	8.8
St. Louis	12.7	12.5	3.5	8.7
St. Joseph*	13.6	15.6	4.0	7.8
Wichita, Kans.	13.2	15.2	4.0	7.5
Bartlesville, Ok.	15.7	13.2	5.0	8.5

*State tax 2 cents, 1-cent city tax and 1-cent Federal tax.

Discounts to dealers, effective March 1, 1934: Undivided accounts, 4 cents a gallon on Red Crown Ethyl and Standard Red Crown, divided accounts, 2½ cents a gallon on Red Crown Ethyl and Standard Red Crown.

Stanolax Furnace Oil in Chicago

Effective Nov. 4, 1934, f.o.b. Chicago tank wagon prices: No. 1 (36-40 lt. stw. zero), less than 100 gallons, 8¼ cents; 100-149 gallons, 7¼ cents; 150 gallons or more, 6½ cents; No. 2 (30-34, stw. zero), less than 150 gallons, 7¼ cents; No. 3 (22-24, zero), less than 150 gallons, 7 cents; No. 4 (13-16 zero), less than 400 gallons, 7 cents; viscosity of No. 4, 35 at 100° F.; No. 5, less than 400 gallons, 5¾ cents. For deliveries of more than stated quantities of Nos. 2, 3, 4 and 5, deduct 1 cent.

Naphtha

	Tank wagon*
Oleum spirits	16.9
V.M.&P. naphtha	18.0
Cleaners' naphtha	18.0
Stanisol	18.0

*Prices include 2-cent Illinois tax, but not 1-cent Federal tax.

Prices f.o.b. Chicago, September 18, 1933. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

Southern District

STANDARD OIL CO. (KENTUCKY)

	Gasoline: Tank wagon	Service station	Incl'ds tax	Kero. tank wagon
Atlanta, Ga.	15.0	16.0	7.0	14.5
Augusta	16.0	17.0	7.0	14.5
Macon	19.0	21.0	7.0	14.5
Savannah	17.5	19.5	7.0	14.0
Birm'ham, Ala.	19.0	21.0	8.0	14.0
Mobile	16.5	17.5	8.0	13.0
Montgomery	17.0	18.0	8.0	15.0
Jackson, Miss.	17.5	19.5	8.0	13.0
Vicksburg	17.5	19.5	7.0	13.0
Jack'ville, Fla.	18.0	20.0	8.0	11.5
Miami	18.0	20.0	8.0	13.5
Pensacola	16.0	17.0	8.0	13.5
Tampa	18.0	20.0	8.0	12.5
Lexington, Ky.	16.0	17.5	6.0	11.5
Covington	14.5	15.5	6.0	11.5
Louisville	15.5	16.5	6.0	11.0
Paducah	14.5	15.5	6.0	11.0

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 3 cents on gasoline and one-half cent on kerosene, Kerosene prices in Georgia and Mississippi include 1 cent state tax; in Alabama, an inspection fee of one-half cent on kerosene and one-fortieth cent on gasoline; in Florida an inspection fee of one-eighth cent on kerosene and gasoline. To Pensacola, Mobile and Birmingham state taxes on gasoline add 1 cent city tax.

Southwestern District

MAGNOLIA PETROLEUM CO.

	Gasoline: Tank wagon	Service station	Incl'ds tax	Kero. tank wagon
Dallas, Tex.	13.0	15.0	5.0	8.5
Fort Worth	13.0	15.0	5.0	8.5
Houston	15.0	17.0	5.0	8.5
San Antonio	16.0	18.0	6.0	8.5
El Paso	18.0	20.0	5.0	11.0
Muskogee, Ok.	15.0	17.0	5.0	6.0
Okla. City	15.0	17.0	5.0	7.0
Tulsa	15.0	17.0	5.0	7.5
Ft. Smith, Ark.	14.1	16.5	5.0	8.0
Little Rock	16.6	19.0	7.5	9.0
Texarkana	14.0	16.0	5.0	8.5

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline: Tank wagon	Service station	Incl'ds tax	Kero. tank wagon
Atl'tic City, N.J.	10.5	12.0	4.0	9.0
Newark	7.9	10.4	4.0	8.5
Annapolis, Md.	14.5	18.0	5.0	10.0
Baltimore	14.0	17.5	5.0	8.5
Cumberland	15.0	18.0	5.0	12.7
Wash'g'n, D. C.	12.0	15.5	3.0	11.5
Danville, Va.	16.5	20.0	6.0	12.9
Norfolk	15.0	18.5	6.0	11.3
Petersburg	15.5	19.0	6.0	11.4
Richmond	15.5	19.0	6.0	11.7
Roanoke	16.5	20.0	6.0	12.9
Charle'n, W.Va.	15.0	18.5	5.0	12.6
Parkersburg	14.5	18.0	5.0	11.2
Wheeling	15.0	18.5	5.0	12.2
Charlotte, N. C.	16.5	19.0	7.0	13.5
Hickory	15.5	18.5	7.0	13.7
Mt. Airy	17.0	20.0	7.0	13.8
Raleigh	15.5	18.0	7.0	13.3
Salisbury	12.5	15.0	7.0	13.6
Charleston, S.C.	15.2	18.7	7.0	11.3
Columbia	14.9	17.4	7.0	13.2
Spartanburg	14.5	17.0	7.0	13.5

Effective October 23, tank wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at regular price less one-half cent. Discount for kerosene, 1 cent off tank wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except in New Jersey, where no discount is given.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline: Tank wagon	Service station	Incl'ds tax	Kero. tank wagon
Omaha	15.9	17.9	5.0	10.0
McCook	16.6	18.6	5.0	10.7
Norfolk	16.3	18.3	6.0	10.4
North Platte	16.7	17.7	5.0	10.8
Scottsbluff	17.4	19.4	5.0	11.5

Note: Discounts to dealers; where service station gasoline prices are (maximum overall, including rent) as follows Reliance 2½c, Standard Red Crown 2½c, Red Crown Ethyl 3½c.

Where service station gasoline prices are below normal, resellers' allowances are reduced one-half of the amount below normal, down to the following (minimum overall including rent) Reliance 2c, Standard Red Crown 2c, Red Crown Ethyl 3c. Discounts to consumers covered only by form CD-1, official commercial consumer contract.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline: Tank wagon	Service station	Incl'ds tax	Kero. tank wagon
N. Orleans, La.	16.0	19.5	‡8.0	†10.0
Baton Rouge	14.2	17.7	6.0	†12.0
Alexandria	15.1	18.6	*7.0	†12.0
Lafayette	16.3	19.8	‡*8.0	†12.0
Lake Charles	15.2	18.7	*7.0	†12.0
Shreveport	13.0	16.5	6.0	†12.0
Knoxville, Tenn.	18.7	22.2	8.0	13.5
Memphis	17.0	20.5	8.0	10.5
Chattanooga	18.5	22.0	8.0	11.0
Nashville	18.0	21.5	8.0	12.0
Bristol	14.5	17.0	8.0	14.0

*Includes city tax of 1 cent. †Louisiana kerosene prices include 1-cent state tax. ‡Includes 2-cent parish tax.

Effective October 23, tank wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at dealer price less one-half cent.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA*

	Gasoline: Tank wagon†	Posted retail	Incl'ds tax	Kero. tank wagon
San Francisco	16.5	18.5	4.0	12.5
Los Angeles	15.5	17.5	4.0	12.5
Fresno, Calif.	17.0	19.0	4.0	14.0
Phoenix, Ariz.	17.0	19.0	6.0	‡16.0
Reno, Nev.	19.0	21.0	5.0	15.5
Portland, Ore.	19.0	21.0	6.0	13.5
Seattle, Wash.	19.0	21.0	6.0	13.5
Tacoma	19.0	21.0	6.0	13.5
Spokane	22.0	24.0	6.0	18.0

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Prices are at company's plant or depots, as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent. ‡Includes 5-cent state tax.

Canada*

IMPERIAL OIL, LTD.

Imperial 3-Star Gasoline

	Gasoline: Tank wagon	Service station	Incl'ds tax	Kero. tank wagon
Hamilton Ont.	†21.0	23.5	6.0	17.5
Toronto, Ont.	†21.0	23.5	6.0	17.5
Brandon, Man.	30.3	33.3	7.0	21.8
Winnipeg, Man.	28.7	31.7	7.0	20.2
Regina, Sask.	29.0	32.0	6.0	21.5
Saskatoon, Sask.	31.8	34.8	6.0	24.3
Edmonton, Alta.	31.2	34.2	6.0	23.7
Calgary, Alta.	28.5	31.5	6.0	21.0
Vancouver, B.C.	27.0	30.0	7.0	24.0
Montreal, Que.	24.0	27.0	6.0	17.0
St. John, N.B.	26.0	30.0	8.0	19.5
Halifax, N. S.	26.0	30.0	8.0	19.5

*Imperial gallon used in Canada. †Governed by service station price.

Maritime provinces, all dealers 4 cents off service station price. All other provinces open dealers 3 cents per gallon off service station price (except Toronto and Hamilton cities which are—open dealers 2½ cents off service station price) 1 cent additional to 100 per cent accounts.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline: Tank wagon	Service station	Incl'ds tax	Kero. tank wagon
Phil'delphia, Pa.	14.0	16.0	4.0	9.0
Pittsburgh	15.0	17.0	4.0	10.0
Allentown	14.5	16.5	4.0	10.0
Erie	15.0	17.0	4.0	9.0
Scranton	15.0	17.0	4.0	10.0
Altoona	15.0	17.0	4.0	10.0
Dover, Del.	14.5	16.5	4.0	10.0
Wilmington	14.5	16.5	4.0	9.0
Springf'd, Mass	13.0	16.5	4.0	7.5
Worcester	13.0	16.5	4.0	8.5
Hartford, Conn.	12.0	15.5	3.0	7.5
New Haven	12.0	15.5	3.0	7.0
Providence, R.I.	11.5	15.0	3.0	6.0

Note—Tank wagon prices are those applicable to consumers purchasing lots of 100 or more gallons in one delivery.

New York and New England

SOCONY-VACUUM CO., INC.

	Gasoline: Posted dealer	Service station	Incl'ds tax	Kero. tank wagon
Albany, N. Y.	13.0	16.5	4.0	8.5
Met. New York	12.25	15.5	4.0	8.5
Br'klin, Queens	11.25	13.5	4.0	8.5
Buffalo	9.5	11.5	4.0	8.0
Rochester	11.5	13.5	4.0	8.5
Syracuse	12.5	17.0	4.0	8.75
Boston, Mass.	12.5	16.0	4.0	8.0
Portland, Me.	13.5	18.0	5.0	8.75
Manch't'r, N.H.	12.0	14.0	5.0	9.0
Burlington, Vt.	16.0	19.5	5.0	9.0

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline: Tank wagon	Service station	Incl'ds tax	Kero. tank wagon
Ohio points	15.5	17.5	5.0	*13.5

*Includes state tax of 1 cent, effective July 22.

Retail Price Changes

Regular-Grade Gasoline and Kerosene

Standard Oil Co. of Kentucky, December 4, advanced tank wagon and station gasoline 2 cents in Paducah; December 6, reduced them 1 cent. December 10, advanced tank wagon kerosene 2 cents in Birmingham. December 12, reduced tank wagon gasoline one-half cent and station gasoline 1 cent in Louisville.

Standard Oil Co. of Louisiana, December 5, advanced tank wagon gasoline 3.7 cents and station gasoline 4.7 cents in Knoxville. December 5, advanced tank wagon gasoline 3.1 cents and station gasoline 4.1 cents in Bristol; December 9, reduced tank wagon gasoline 2.5 cents and station gasoline 3.5 cents. December 8, advanced tank wagon kerosene 2 cents in Alexandria and Shreveport. December 1, an additional Parish tax of 1 cent per gallon was levied on all motor fuel sold in Lafayette, Louisiana, Parish. This brings the Parish tax in that section to 2 cents.

Standard Oil Co. of Nebraska, December 4, reduced station gasoline 1 cent in North Platte.

Standard Oil Co. of Indiana, December 11, advanced tank wagon gasoline 2.8 cents and station gasoline .4 cent in Evansville. December 13, advanced tank wagon gasoline 0.3 cent and reduced station gasoline 2 cents in Peoria.

Continental Oil Co., December 6, reduced tank wagon and station gasoline 2 cents in Butte.

Socony-Vacuum Oil Co., Inc., December 3, reduced station gasoline 3 cents in Manchester. December 13, reduced station gasoline 1 cent in Metropolitan New York; December 14, reduced it one-half cent further. Wholesale gasoline will be quoted hereafter by Socony-Vacuum as Posted Dealer instead of Tank Wagon. The change in wholesale prices is due to the different basis.

Atlantic Refining Co., December 11, advanced tank wagon gasoline 2.35 cents and station gasoline 3.6 cents in Philadelphia; December 14, advanced tank wagon gasoline .75 cent and station gasoline 1.5 cents. December 14, advanced tank wagon and station gasoline 1 cent in Pittsburgh, Altoona and Erie. December 6, reduced tank wagon gasoline 1.25 cents in Allentown, Scranton, Dover and Wilmington; December 14, advanced tank wagon gasoline 1.25 cents and station gasoline 1.5 cents in Allentown, Dover and Wilmington. December 14, advanced tank wagon gasoline 1.75 cents and station gasoline 2 cents in Scranton. December 7, reduced tank wagon gasoline 1.5 cents in Springfield, Worcester, New Haven, Hartford and Providence.

Magnolia Petroleum Co., December 12, advanced tank wagon and station gasoline 2 cents and tank wagon kerosene 2.5 cents in Dallas and Fort Worth; reduced tank wagon gasoline .4 cent in Fort Smith and Little Rock; advanced tank wagon and station gasoline 1 cent and tank wagon kerosene one-half cent in Texarkana.

Late Fields

KANSAS

A test of the crude produced in the Atlantic Oil Producing Co.'s wildcat in C SE NE Section 15-20-33w, Scott County, Kansas, showed it to contain 2 per cent basic sediment; to be of 23.5 degrees gravity, corrected, and to contain 10 per cent gasoline, 8.6 per cent kerosene and the balance asphalt. The asphalt was not broken down.

The Twin Drilling Co.'s discovery well in C SW NW SW Section 13-17-9w, Ellsworth County, pumped 526 bbls. in 24 hours. There was a small quantity of water showing with the oil. It had not been decided whether or not to acidize.

OKLAHOMA

The Bay Oil Corp.'s No. 1, C SW SW SE Section 14-28-3, Kay County, was reported Tuesday morning to be drilling at 3,040 feet. It produced 65 bbls. of oil in 13 hours from sand at 2,960-93 feet and 3,008-13 feet.

The Black Gold Refining Co. has tools in to start a test in C SW NE Section 24-18-5w, in Kingfisher County.

Moore and Deaner have abandoned their Coal County test, C NW NE SE Section 27-2-8, at a total depth of 7,336 feet. Bromide was topped at 7,140 feet. The owners tried to make a paying well out of this by testing out upper formations after failing to find oil in the Simpson series, but the upper sands and limes were no more productive than the lower.

TAXES FOR "HOT" OIL

OKLAHOMA CITY, Okla., Dec. 17.—Collection of the 3 per cent gross production tax on 1,712,283.59 bbls. of "hot" oil produced in Oklahoma was one of the items of "unfinished business" of the State Tax Commission at the end of its fiscal year, June 30, the annual report of the department shows.

However, between June, 1931, and May, 1933, inclusive, the commission collected tax and penalties on 10,286,310.35 bbls., totaling $256,494.41. The tax on the 1,712,283.59 bbls., still in litigation and process of collection, amounts to $64,543.18.

The commission claims credit for discovering through audits and investigation 9,329,837.48 bbls., or 78 per cent of the total "hot" oil.

JAMES BALDRIDGE DIES

James Baldridge, 45, who has been operating in the Amarillo or Panhandle district of Texas for several years, died in San Angelo, Tex., on December 11, after a heart attack.

Pipe Line Construction

PIPE LINE FACILITIES ENLARGED

MUSKEGON, Mich., Dec. 17.—Simrall Pipe Line Co. has recently completed installation of two miles of three-inch gathering lines improving its facilities for handling increasing production in the West Branch township, Ogemaw County oil field. Crude is piped to the company's loading rack at West Branch and transported in tank cars to the Roosevelt Refinery at Mt. Pleasant.

TEXAS GAS LINE COMPLETED

To increase the gathering capacity of their natural gas system that serves its gasoline plants the Graham Oil and Gas Co. has just completed four miles of 8-inch diameter Airco welded gas line in the area adjacent to Graham, Texas. The contract for the work was awarded to Hubbard and Cherry, contractors of Ranger, Texas, and as much of the work as possible was done by manual labor which accounts for the time to complete the job being about three weeks. The pipe used was reclaimed and reconditioned material purchased by the gas company.

GULF COAST WATER SHIPMENTS DURING OCTOBER

Company and terminal—	Crude — Coastwise	Crude — Exports	Refined — Coastwise	Refined — Exports	Total
Atlantic P. L. Co., Atreco	1,805,442.45	.....	6,996.31	.....	1,812,438.76
Atlantic P. L. Co., Texas City	359,425.58	.....	6,281.14	.....	365,706.72
Atl. P. L. Co., Harbor Island	406,384.28	.....	.....	.....	406,384.28
Gulf Ref. Co., Port Arthur	265,794.08	190,686.48	1,926,217.87	18,893.22	2,403,591.65
Humble. O. & R. Co., Baytown	910,587.97	170,000.00	1,679,908.75	343,834.09	2,936,030.81
Hum. O.&R.Co., Harbor Island	1,807,557.22	.....	.....	.....	1,807,557.22
Humble O. & R. Co., Ingleside	100,907.47	.....	.....	.....	100,907.47
Humble O.&R. Co., Texas City	339,228.35	.....	.....	.....	339,228.35
Magnolia Pet. Co., Beaumont	802,162.50	.....	2,324,175.02	.....	3,126,340.52
Pure Oil Co., Smith Bluff	324,441.00	.....	631,397.00	.....	955,838.00
Shell Pet. Corp., Houston	199,997.34	187,804.41	1,289,493.26	.....	1,677,295.11
Shell Pet. Corp., Norco	.....	.....	194,273.99	73,130.84	267,404.83
Stand'd O. Co. (La.) Baton R.	539,995.00	.....	536,834.00	576,396.00	1,652,225.00
Sun P. L. Co., Sabine Pass-Sun	1,579,185.99	.....	.....	.....	1,579,185.99
The Texas Co., Port Arthur	1,140,455.00	564,687.00	1,759,168.00	502,502.00	3,966,812.00
Miscellaneous, Houston	1,360,587.69	457,716.59	1,448,190.89	278,998.91	3,545,494.08
Total, October, 1934	11,942,151.92	1,570,894.48	11,803,936.33	1,793,755.06	26,942,440.79
Total, September, 1934	11,090,055.58	1,536,906.21	11,252,100.71	2,533,828.84	26,412,891.34
Difference	852,096.34	33,988.27	551,835.62	740,073.78	529,549.45

WASHINGTON NEWS

(Continued from Page 15)

ways which have traditionally been thought forbidden by the antitrust laws. Such control of competitive practices seems clearly necessary in the bituminous coal, oil and natural gas industries. In the case of oil, special legislation authorizing the fixing of state production quotas appears necessary."

Before any type of control is authorized for an industry the board states that industry should be required to accept whatever safeguards are required to protect the interest of consumers, of wage earners, and the Nation's long-run interest in the conservation of its natural resources.

This report of the National Resources Board to the President, while it does not embody, as a whole, specific recommendations for legislation, will be the basis of much of the proposals for continuation of the NRA, Public Works and other emergency agencies set up under the administration.

States Need Not Wait to Start Interstate Compact

Although no comment has been forthcoming from any members of the Cole Investigating Committee it is known that at least one member of the committee, who had been led to believe that the formulation of an interstate compact could be reached at the first meeting of representatives of the various producing states, was greatly disappointed at the conclusion of the Marland conference. His feeling at the time, it is rumored, was that the industry had been misleading the committee through its advocacy of compacts. At the time, it has been learned, he was as undecided on what course of action the committee would take as he was when the first meeting was held. The idea of an interstate compact has, apparently, been well received by the various members, who, it is believed, would like to see such a plan in operation.

An interstate compact between the principal oil-producing states could be put into operation within six months is the opinion of one individual who sat in the conferences in Ponca City, Okla., if Texas would agree to a feasible plan. He stated that, in his opinion, hope of a compact is not gone. It is a job that cannot be done overnight, but once the various states reach an agreement can be accomplished very quickly by the states.

He explained that the state legislatures do not have to wait until the enactment of permissive legislation to pass the state laws. To save time the various legislatures could take the matter up as soon as they convene.

Government Files Brief in Amazon-Panama Case

During presentation of the Amazon and Panama cases before U. S. Supreme Court a few questions were addressed to Assistant Attorney General Stevens which he thought it best to answer in writing. He was granted leave to file a supplemental brief with the court, in which he explained the effect of the failure of Section 9(c) to require the President to state that he made any finding prior to exercising the authority conferred upon him by the section. The question of what defenses a person charged with a violation of the section could offer was raised, since it was claimed by the Government that no finding by the President was required as a necessity of enforcing the provisions of the law.

The Justice Department alleges that the only defenses which would be open are that the law is unconstitutional, or that the defendant had not violated the order of the President. If the prosecution was for violating a rule or regulation which had been prescribed under Section 10(a) in order to carry out the purposes of Section 9(c) the additional defense would be available that the rule or regulation was unconstitutional or not authorized by the section.

Arguments as to the validity of the delegation of power to the President are also covered briefly in this brief, the Government contending that it is not necessary that the act or law specify "whether" or "when" the law should be put into operation, and that the policy declared by Congress in Section 1 of the act which sets forth the standards which shall govern the administration and application of the provisions of Title 1 of the National Recovery Act sets forth and delimits the authority vested in the President under this section of the act.

The Petroleum Administrative Board announced an important correction dealing with withdrawals of crude oil from storage in the East Texas Field. The order applied specifically to two pending applications to withdraw crude oil from the field, each such application requiring individual treatment. The order is not one of general application and does not apply to other requests for withdrawals, each of which will be dealt with individually as presented.

SUMMARY OF STATEMENTS RELATING TO BUSINESS OF VARIOUS PIPE LINES FOR MONTH ENDING NOVEMBER 30, 1934

	Gross stocks	Runs from wells	Other receipts	Regular deliveries	Other deliveries
Nat. Transit	507,492.50	254,715.83	955,081.90	532,861.97	726,535.98
S. W. Pa. P. L.	381,545.99	78,589.52	642,987.53	447,303.92	279,392.61
Eureka P. L.	913,404.34	263,976.81	236,832.75	270,014.32	167,239.52
Buckeye P. L. (Macksburg)	255,078.32	254,514.86	154,597.22	291,638.96	110,889.73
Buckeye P. L. (Lima, etc.)	2,294,359.74	54,354.35	2,127,267.75	1,292,936.73	927,425.38
Buckeye P. L. (Cleveland)	58,796.74	10,311.13	223,730.61	1,212.16	229,980.61
Indiana P. L.	386,028.49	.....	1,363,155.54	954,144.65	320,032.82
Pure Oil	493,203.00	563,075.00	31,791.00	710,957.00	.....
Southern P. L.	90,046.59	.....	103,378.81	31,791.26	77,679.59
Bradford Tran.	334,143.81	461,017.76	.....	481,511.72	.....
N. Y. Transit	112,874.35	35,122.51	152,403.58	191,404.75	.....
Northern P. L.	247,685.91	.....	497,388.54	149,403.50	322,718.35
Tide-Water P.	944,160.98	18,864.08	422,765.66	280,304.42	.....
Tuscarora Dev.	2,786.06	.....	.....	282,937.55	.....
Valvoline P. L.	106,159.28	73,925.41	.....	55,187.72	20,052.71
Other companies	163,261.30	329,259.35	459.22	224,800.62	.....
Totals, November	7,296,026.70	2,396,226.61	6,501,840.11	6,299,411.26	3,170,936.80
Totals, October	7,167,250.27	2,674,031.53	7,160,314.98	6,463,716.05	3,288,857.01
Difference	+130,778.43	—275,804.92	—358,474.87	—164,304.79	—117,920.21

Allowables Increased in Texas, Oklahoma, Kansas

WASHINGTON, D. C., Dec. 18.—Daily allowable crude oil production has been increased 153,300 bbls. effective December 17, making the national production allowable 2,460,300 bbls. daily. This increase is granted for the balance of December and the January allowable will be the same as the allowed production for the balance of December. This increase was recommended by Bureau of Mines experts so far as to provide crude for the refining of sufficient gasoline to bring inventories up to the necessary economic levels for the next few weeks. The necessary crude should be taken from daily production instead of from storage, the experts also recommended.

Texas received the largest increase, being raised from 941,300 bbls. to 1,006,800 bbls.; Oklahoma was second, going from 451,600 bbls. to 489,300 bbls.; California received the third highest coming from 456,800 bbls. to 473,900 bbls. Other states were raised as follows: Kansas from 123,900 bbls. to 137,100 bbls.; Louisiana from 94,000 bbls. to 99,700 bbls.; Colorado, 3,000 bbls. to 3,500 bbls.; Montana, from 8,000 bbls. to 9,300 bbls.; New Mexico, 45,900 bbls. to 49,000 bbls.; Wyoming, 32,600 bbls. to 35,700 bbls.; Arkansas, 29,000 bbls. to 31,000 bbls.; Michigan, 27,900 bbls. to 28,100 bbls.; Pennsylvania, from 35,000 bbls. to 35,500 bbls.; Ohio, from 11,500 bbls. to 11,700 bbls.; Kentucky, from 11,700 bbls. to 14,000 bbls.; Indiana, from 2,100 bbls. to 2,200 bbls. Illinois, New York and West Virginia remained unchanged at 11,700, 10,000 and 11,000 bbls., respectively.

Natural Gasoline Leads in the Group 3 Market

(Continued from Page 26)

U. S. Motor material, excess stocks in the Panhandle and North Texas were said to have made it possible to pick up odd cars at different times throughout the week at 3¼. A few inquiries for shipment after the first of the year were appearing.

Kerosene added to its strength and was up an eighth. Demand for burning oils was vigorous with a tendency to higher prices.

Bright and cylinder stocks were slightly off, but prices held. Neutrals, fairly steady. Wax was weak, with no change.

WHITEFORD TO NEW POSITION

William K. Whiteford, vice president in charge of production of the Barnsdall Oil Co., has accepted the position of vice president of the British-American Oil Producing Co. Mr. Whiteford will take the place made vacant last June by the death of George W. Snedden.

HUMBLE INCREASES CAPITAL

HOUSTON, Tex., Dec. 17.—Humble Oil & Refining Co., by resolution of its stockholders at a special meeting, amended its charter and increased its capital from $75,000,000 to $175,000,000. No change was made in the number or character of the capital stock of the company, 9,000,000 shares of non-par value.

"The charter amendment and capital increase," said R. L. Blaffer, president of the company, "was made in order that the company's book account may be made to conform to the actual facts."

CANADIAN GAS PRODUCTION

OTTAWA, Canada, Dec. 8.—Figures of the Dominion Bureau of Statistics show production of natural gas from all Canadian fields in September totaled 1,176,365,000 feet, against 898,456,000 feet in August and 1,148,561,000 feet in September, 1933. Production for the nine months of 1934 totaled 16,046,753,000 feet, which was 2 per cent below the total of 16,377,144,000 feet for the corresponding 1933 period.

TO our many friends, throughout the oil and gas fields of the world, we extend our sincere good wishes for a Christmas of contentment and good cheer. May the New Year bring the consummation of your fondest hopes and ambitions.

THE PARKERSBURG RIG & REEL CO.

PARKERSBURG, WEST VIRGINIA

Michigan Tour Reveals Many Things of Interest

(Continued from Page 18)

fields the oil is accompanied by water and paraffin accumulates inside of the working barrel, tubing and between tubing and casing.

Production Problems

In the majority of wells in Michigan oil fields water accompanies the oil and

Independent natural gasoline plant in Michigan

an emulsion results which requires treatment with heat and chemicals before pipe line oil can be run from the lease. This water increases lifting costs and presents additional troubles because paraffin accompanies the water in many instances and accumulates in working barrel, tubing and casing. Dissolved calcium chloride may also accompany the water and oil and if not removed at the lease may cause trouble in the refinery.

There are a number of different methods applied to the handling of cut oil in Michigan, but most of the processes have previously been used in other fields. The Pure Oil Co. has installed a number of central treatment stations consisting of duplex dutch ovens through which the incoming fluid from the well passes inside of the 8-inch pipes and after heating this mixture it is delivered into an insulated settling tank where chemicals may or may not be added.

Some of these tanks are filled with excelsior or other material that tends to break up the emulsion and the water settles to the bottom of the tank and is drawn off through a syphon while the nearly clear oil passes to a second tank where further separation takes place and the pipe line oil is delivered into the lease storage tanks.

Paraffin in the well also gives considerable trouble and in some instances it has been found difficult to pull the rods and tubing because the gummy mixture made up of sludge, salt and wax cakes in such quantities that it balls up as the tubing or rods are pulled.

The use of scrapers in the hole after pulling is quite common, and in some instances it has been found necessary to pull the tubing about half way out of the hole and then use a solvent at each join and run the string back to bottom to lubricate the pipe so that it can be completely removed from the casing.

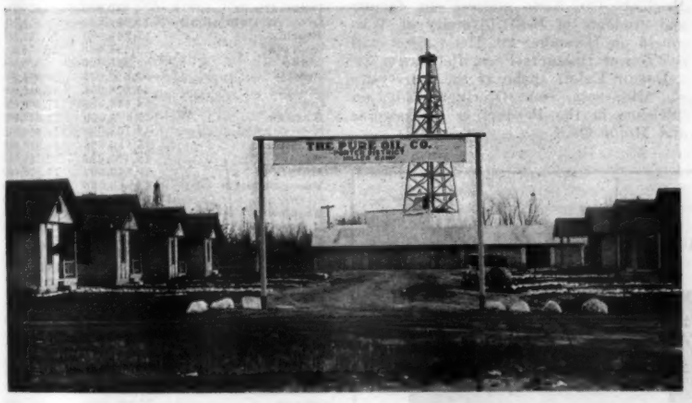
To handle this problem some companies pull rods and tubing at frequent intervals before the accumulation is heavy enough to cause particular trouble. Others add a solvent or chemical to the hole at frequent intervals so that the paraffin and its accompanying sludge and salt is kept in solution and can be pumped out with the oil.

The trouble with this sediment is not confined to the well alone for it frequently accumulates in the gathering lines leading from the lease tanks and necessitates the use of "go-devils" to clean them.

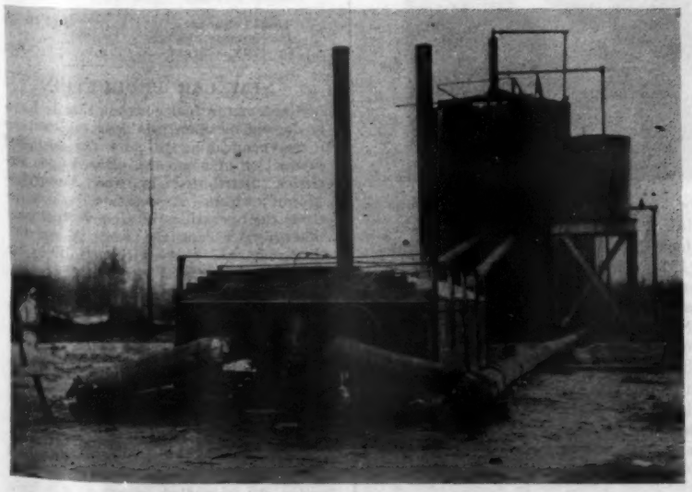
To one who has never been in this old timber belt of Michigan the oil fields present many interesting surface conditions. Sand is very common in all fields and in some parts large stumps of trees still remain, while in other areas the trimmings from the large pine trees cut off the land have been covered with drifting sand and soil and rotted so that the ground sinks under the tread of the person walking through the fields.

There is little timber now around the oil fields in Midland and Isabella Counties although there is some brush and a few trees other than white or cork pine, the principal growth of the forests cut in the period following the Civil War and up to the early nineties.

Profiting by the example of reckless waste practiced in cutting the former forests of Michigan the state authorities are now keeping close guard upon the gas and oil resources of the State and have enacted and enforced laws and rules that will conserve the gas and oil. At the same time the demand for Michigan crude oil is somewhat limited, but because of the decline in rate of production and the taking of the wells by water it is anticipated that 1935 will see considerable drilling activity in completing wells in proven territory in addition to prospecting for other fields in all parts of the southern penisula.



Typical oil field camp in Michigan



Dutch oven type of heater for emulsions produced by wells in the Porter field, Midland County, Michigan

Oil Exchange Expected to Start Trading in Crude Oil and Gasoline in February

NEW YORK, Dec. 17.—Plans for the operation of an exchange to deal in futures covering crude oil and gasoline will be formally announced here this week according to information available today. The exchange will be the first to operate in the oil industry in over 40 years and will be directed by the Commodity Exchange, Inc., which operates exchanges in several commodities.

The petroleum committee of the Commodity Exchange has completed practically all details in connection with the oil exchange and this week will send out a formal statement which will explain its plan of operation. Several thousand oil executives and those connected with the oil business in other capacities are among those who will receive the announcement.

The commodity exchange has had under consideration the starting of an oil exchange for over three years and now expects to start actual trading the first week in February. There has been no general solicitation of memberships but it is known that several have been sold both in this country and Europe. The prices on these memberships advanced last week from $2,300 to $2,900 and today were quoted at $3,500.

Those receiving the announcement are asked to make suggestions as to any changes or additions which they think desirable. Thirty-six gravity crude oil in the Mid-Continent is made the basis for the trading in crude oil. Delivery points are said to be at Houston, Tex., and Drumright, Okla. In the case of gasoline, three grades of U. S. Motor based on octane ratings similar to the grading now generally recognized in published quotations, are the basis for the trading in this product. Delivery points for this product are the Gulf Coast and New York with probable additions to be made later.

Learn of Advantages of Propane Dewaxing

(Continued from Page 17)

ventional 150 to 155 at 210° F. bottoms, thereby increasing his yield of neutral oil from 40 to 60 per cent. And this, in view of the present markets for Pennsylvania lub materials, is an extremely important point.

Upon deresinating and removing approximately 8 per cent of the original residuum which represents somewhat less than 1 per cent on the crude, filter yields can be enormously increased and at the same time a better balance between the yield of neutral and bright stock can be secured.

Asked to compare realizations by conventional and propane processing methods as applied to Pennsylvania residuum, Mr. Keith presented the following estimates covering comparative realizations on processing 20 per cent Pennsylvania residuum by current and propane deresinating methods, on a basis of 3,000 bbls. of crude oil per day:

CURRENT METHOD

Charges—	
Raw residuum, 3,000 × .20 × 42 × 10c	$2,520
Filtering, 3,000 × .20 × 42 × 2.5c	882
Centrifuging, 3,000 × .20 × 42 × .97 × 2c	490
Total charges	$3,892
Credits—	
Bright stock, 3,000 × .20 × 42 × .97 × .82 × 19c	$3,820
Petrolatum, 3,000 × .20 × 42 × .97 × 18 × 2.5c	111
Total credits	$3,931
Indicated profit	39

PROPANE METHOD

Charges—	
Raw residuum, 3,000 × .20 × 42 × 10c	$2,520
Deresination, 3,000 × .15 × 42 × 20c	90
Dewaxing bright stock, 3,000 × .15 × 42 × .93 × 2c	347
Filtering bright stock, 3,000 × .15 × 42 × .92 × 81 × 1c	141
Pressing neutral, 3,000 × .08 × 30c	72
Reducing neutral, 3,000 × .03 × 8c	10
Filtering, 3,000 × .04 × 35c	42
Total charges	$3,231
Credits—	
Bright stock, 3,000 × .15 × 42 × .92 × .81 × .99 × 19c	$2,650
Neutral, 3,000 × 42 × .04 × 24c	1,209
Petrolatum, 3,000 × .15 × .92 × .19 × 2.5c	82
Gas oil and slack wax, 3,000 × 42 × .01 × 3.75c	47
Fuel oil, 3,000 × .15 × 42 × .08 × 2.5c	38
Total credits	$4,026
Indicated profit	795

NEWS FOR SALES DEPARTMENTS

Gain in Canned Goods Sales Led by Motor Oils in 1934

A year-end statement of the Continental Can Co. reviews the increase in the use of cans in 1934. Gains were due both to the added movement of commodities marketed in cans and to the increase in the number of commodities packed in this manner.

Leading among these is motor oil, which in the last year or two has rapidly expanded its use of this package. While authoritative figures are lacking, there are estimates that the motoring public is consuming annually over 200,000,000 quarts of oil in tin containers and a recent survey showed that 65 per cent of the nation's service stations are selling oil in these sealed cans. The research end of the can industry is constantly developing new uses for tin containers.

UNION GETS AWARD

The unusual cruising activities of the United States fleet during the next six months is revealed in the Navy Department announcement that it will require 2,500,000 barrels of fuel oil at San Pedro in that period.

As result of bids opened at Washington this week it is reported that the Union Oil Co. won a contract for approximately 75 per cent of the total requirements, with the balance going to the Texas Co., Rio Grande Oil Co. and the Hancock Oil Co. The price is reported approximately 76 cents a barrel.

The sharp increase in fleet requirements for final half of the fiscal year will be occasioned by the war problem cruise on which some 130 ships will operate in the California-Hawaii-Alaska triangle during the period May 13 to June 8, next; plus a cruise to San Francisco in February and fleet tactics in January and Ajril.

TOMLINSON ADVANCED

Frank C. Hart, president of Hartol Products Corp. and subsidiaries, has announced the appointment of Phillip H. Tomlinson as co-ordinator of the company's terminals, with headquarters in New York.

Mr. Tomlinson is a native of New Jersey and attended Colgate University. He has been associated with the company's operating and construction activities for the last five years in the East and in Texas, his last assignment being supervision of construction of Hartol's new terminal at Boston, which is now nearing completion.

CHICAGO OIL MEN'S CLUB

The first permanent headquarters of the Chicago Oil Men's Club, occupying about one-third of the main floor of the Petroleum Building at 616 South Michigan Avenue, is ready for occupancy. The formal opening will take place Thursday, December 20, celebrated with a house warming party. Buffet luncheon will be served from noon to 3 p.m., and members will proudly exhibit their elegant club rooms to friends and business associates.

IMPORTS OF OIL PRODUCTS

The following statistics of imports of petroleum and its products for the month of October, 1934, are furnished by the U. S. Department of Commerce:

Imports—	Bbls.
Petroleum	1,899,230
Fuel oil	568,755
Liquid derivatives	67
Gasoline	20
Finished light products	12
Illuminating oil	511
Lubricating oils	61
Paraffin (lbs.)	2,506,656

HIGH COMPRESSION MOTORS

Based upon the few 1935 model cars introduced to date, there is no disposition shown by their manufacturers to reduce the compression ratio and the most recent announcement, that of the Hudson Motor Co., states that it was offering an optional head for one of its models that would bring the compression ratio to 7 : 1.

There is also a tendency for manufacturers to use every means possible to equalize the effect of raising the compression ratio by using specially designed heads and special alloys that will permit a more rapid dissipation of the motor heat.

GASOLINE CONSUMPTION HIGHER

OTTAWA, Canada, Dec. 15.—Figures compiled by the federal department of trade and commerce from the returns of the provincial gasoline tax departments show for August increases in gasoline sales for seven out of nine Canadian provinces, and a gain in the total. For the Dominion, the August total of 63,314,000 gallons compared with a July total of 61,879,000 gallons and with 61,905,000 gallons for August, 1933. The total for the entire Dominion for the eight months of 1934 is 333,186,000 gallons against 316,803,000 gallons in the 1933 period.

NOVEMBER GASOLINE MAKES AVERAGE GAIN

As evidence of a partial recovery from the low gasoline service station prices of November 1, a slight gain of .64 cent was reported in the average 50-city price December 1, 1934. The price, 12.43 cents exclusive of tax is still low as compared with previous averages in 1934. The market strengthened considerably in the East, lagged by slightly increased prices in southern and middle western stations. Prices declined in key cities of the Southwest.

The price in the 50 cities on December 1, 1933, was 14.17 cents, 1.74 cents higher than this year's, which is the lowest December price yet recorded.

EGLOFF ADDRESSES STUDENTS

Dr. Gustav Egloff of Universal Oil Products Co. is to address the faculty and students of the University of Wisconsin on December 20. His subject will be "Newer Products From Petroleum."

Doctor Egloff spoke at the University of Minnesota, on December 11, on "Science in the Production of Gasoline and Motor Oil."

C. L. MAYHALL » » »

As director in charge of refined oil sales, C. L. Mayhall guides the marketing operations of the Anderson-Prichard Oil Corporation and the Col-Tex Refining Company in the middle western territory from Ohio to Montana. The Anderson-Prichard Oil Corporation started in business years ago to specialize in technical and industrial naphthas. Since that time the company has actively entered into the production of crude oil and has many times enlarged its manufacturing activities to include all grades of gasoline, road oils and asphalts. Its various products are sold in 40 states of the Union and in Canada and Cuba.

Mr. Mayhall's experience in the oil industry began just befor the World War when he joined the old Ohio Cities Gas Company, now the Pure Oil Company. In 1918, together with William B. Bassett, he organized the Imperial Refining Company, and established offices in Ardmore, Okla., where he took charge of the plant and its sales. In the latter part of 1919, when the Ranger Field was under development, the offices were moved to Fort Worth, Tex. From there he conducted a general sales office and represented several major eastern oil marketers in the North Texas territory. After several years of this work, he left Imperial to become associated with L. H. Prichard and J. S. Anderson in the Anderson-Prichard Oil Corporation. In returning to Oklahoma City, the sales headquarters of the company, Mr. Mayhall returned to his old home, as his early business experience was with the Chamber of Commerce of that city. He is widely known, takes an active part in all matters pertaining to oil marketing policies, and enjoys the confidence of the oil sales fraternity.

Gasoline Consumption Off 5.4 Per Cent in September

Although September gasoline consumption in the United States showed a decrease of 85,135,000 gallons from August, the month's consumption was well above that of September, 1933. With few exceptions, the states showed slight declines in accordance with the early fall trend. In gasoline sales, the nine-month period ending September 30, 1934, leads the corresponding period of 1933 by a margin of more than 750 million gallons. This represents a 6.46 per cent better market in 1934.

The table below is compiled on the basis of tax reports by wholesalers and retailers in the states listed.

GASOLINE CONSUMPTION BY STATES, SEPTEMBER, 1934

	Aug., 1934 Gallons	Sept., 1934 Gallons
Alabama	13,737,000	13,583,000
Arizona	6,110,000	6,064,000
Arkansas	12,929,000	12,706,000
California	113,863,000	106,319,000
Colorado	14,164,000	19,075,000
Connecticut	26,205,000	24,890,000
Delaware	4,352,000	3,978,000
Dist. of Columbia	10,386,000	8,059,000
Florida	17,341,000	17,235,000
Georgia	21,626,000	20,170,000
Idaho	7,285,000	6,598,000
Illinois	99,589,000	92,040,000
Indiana	43,876,000	44,989,000
Iowa	36,453,000	37,000,000
Kansas	35,000,000	33,039,000
Kentucky	18,168,000	16,856,000
Louisiana	15,686,000	14,990,000
Maine	15,434,000	12,759,000
Maryland	19,840,000	17,976,000
Massachusetts	61,485,000	52,577,000
Michigan	76,232,000	76,101,000
Minnesota	43,695,000	40,915,000
Mississippi	11,499,000	11,217,000
Missouri	44,863,000	41,376,000
Montana	9,959,000	7,595,000
Nebraska	20,662,000	18,568,000
Nevada	2,163,000	2,302,000
New Hampshire	8,866,000	7,282,000
New Jersey	70,934,000	69,981,000
New Mexico	5,691,000	5,460,000
New York	160,083,000	144,938,000
North Carolina	25,879,000	24,326,000
North Dakota	10,784,000	9,394,000
Ohio	91,328,000	85,222,000
Oklahoma	26,026,000	27,239,000
Oregon	15,805,000	16,517,000
Pennsylvania	110,521,000	101,099,000
Rhode Island	11,176,000	9,686,000
South Carolina	11,515,000	10,986,000
South Dakota	9,680,000	10,223,000
Tennessee	19,334,000	19,398,000
Texas	77,454,000	78,918,000
Utah	6,635,000	6,931,000
Vermont	4,399,000	5,329,000
Virginia	24,728,000	22,283,000
Washington	24,833,000	23,155,000
West Virginia	14,411,000	13,857,000
Wisconsin	42,053,000	41,169,000
Wyoming	4,916,000	4,285,000
Total	1,581,656,000	1,496,524,000
Daily average	51,021,000	49,884,000
Change from previous year:		
Total change		+57,088,000
Percentage change in daily average		+3.97%

NEW CAR PRODUCTION

Since motor fuel consumption is largely dependent upon total car registrations it is encouraging to note the sustained production of new cars. Based upon statistics distributed by the Automobile Manufacturers' Association, which include the operations of all principal manufacturers except the Ford Motor Co., this year will close with a gain in car production in the United States in excess of 30 per cent over last year.

Production by members of the organization for the 11 months of this year was estimated at 1,926,441 motor vehicles which, besides representing an increase of 33 per cent over the equivalent period of 1933, represented an increase of 29 per cent over the total output of last year.

November production was estimated at 76,798 units, a decrease of 18 per cent under the preceding month and a gain of 62 per cent over the same month last year.

Strong Retail Market in East Leads to Optimism

(Continued from Page 27)

It is known that at least two large buyers in this territory have had difficulty in covering their requirements even at this price which is high in relation to gasoline quotations. Little material is available at the Gulf Coast where one coastwise shipment is reported to have brought 4¾ cents last week. Due to this domestic situation export prices at the Gulf have advanced from one-fourth to three-eighths cents. The export gasoline market is firm.

Furnace oils are unchanged with 4¾ cents the prevailing tank car prices for Nos. 1, 2 and 3, and 5½ to 5¾ cents for No. 1 oil including range oils. Industrial fuels are strong at 4¼ cents with U.G.I. gas oil bringing 4½ cents.

The spread on most grades of steam refined stocks and bright stocks have increased due to advances by several sellers while others continue the quotations in effect at the start of the month.

California Plural Methods of Drilling

(Continued from Page 14)

completion just as would be the case under normal conditions. In the case of the three wells mentioned above, Nos. 9, 9-A and 9-B, which were completed as multiple producers through one primary hole the 13⅜-inch strings were landed and cemented at 500 feet. The 10¾-inch water strings are cemented a little below 3,100 feet and if at any time it is desired to re-enter either of the three wells the surface casing and, of course, all strings within it, is shifted to the center of the conductor pipe or to any other position which will align it with the equipment used.

Foundation

Completion of these three multiple wells and freedom from mechanical trouble during drilling operations can be attributed partly to the type of foundation used and its sturdiness. Drilling was done through a Collins stabilized foundation, a single leg type which was perfected by Barnsdall Oil Co. in 1930. The Collins single-leg stabilized foundation consists of three essential members. These factors are a single large central column, a large stabilizer around the column at the ocean floor level and a base for the derrick on top of the column. The central column is designed to afford ample strength to resist bending and offers a minimum area of exposure to wave action. Those in use at Elwood, have a working bending moment at sea bottom level of 18,000 foot-tons with a safety factor of 5. Under these conditions the derrick will withstand wind velocities of 100 miles per hour and the foundation will resist wave pressures as high as 2,000 pounds per square foot.

The multiple type of drilling was not designed to permit operators to deviate wells so as to bottom them beneath adjoining property and the patentees have established a fast and rigid rule that no licenses will be granted under any conditions where the object is not of the highest ethical nature. Neither the Barnsdall nor Rio Grande will countenance such work or engage in any such practice. It is quite likely in view of the fact that approximately 50 per cent of the Elwood Field is buried beneath the Pacific Ocean that multiple drilling will become an important factor whenever progressive exploitation of the Sespe formation gets under way. This is especially important because this type of work will greatly reduce the number of foundations required and at the same time permit operators to effectively develop the zone through selective placing at the bottom of the various wells. In other words three wells drilled through a primary hole can be so bottomed that they would be equivalent to the drilling of three individual wells under the old method.

Six Socony-Vacuum Men to Retire in December

With terms of service averaging 41 years, six executives of the Socony-Vacuum Oil Co., Inc., will retire at the end of 1934, it was announced by the company today. The veterans are terminating their long service voluntarily, on pension.

The men had been with the company from 33 to 48 years. William J. Higgs, former errand boy for John D. Rockefeller, Sr., in the early days of the petroleum industry, possessed the longest record with Socony-Vacuum. He had been active since 1887.

The retiring officials are: Charles W. Hadley, chairman of the manufacturing committee of the corporation; F. H. Fitzgerald, director of the Standard-Vacuum Oil Co., in charge of lubrication sales; Ernst Michaelson, executive of Socony-Vacuum's European organization; H. C. Cornforth, chairman of the board of the Vacuum Oil Co., Pty. Ltd., of Melbourne, Australia; W. L. Lever, manager of the order and shipping department of the Standard-Vacuum Oil Co., and Mr. Higgs, assistant treasurer of the Socony-Vacuum Oil Co., Inc.

CHAMPLIN OPERATIONS

MONTREAL, Quebec, Dec. 15.—Shareholders of the Champlin Oil Co. held their annual meeting here recently when the original directors were re-elected, with Lucien Beauregard, K. C. and Ernest Savard added.

The company began operations in 1932, when it merged a number of refining and marketing organizations. In the past year it has acquired the Eastern Oil Co., Ltd. and National Oil & Gas, Ltd. as well as assets of Shawinigan Oil & Gas, Ltd. and J. Forget. Approximately $146,000 has been spent in permanent plant and other properties. All subsidiary marketing and service companies, except automobile associations, have been merged into Champlain Oil Sale, Ltd., a new subsidiary. The company now owns and controls service stations and has dealer outlets approximating 740 in number with 17 bulk storage plants and 55 motor trucks. New bulk plants have been strategically located at St. Agathe, St. Scholastique, Valleyfield, Shawiningan Falls, St. John and Epiphanie.

W. T. WAGGONER DIES

FORT WORTH, Tex., Dec. 15.—W. T. Waggoner, 82, Fort Worth capitalist and oil man, and dean of horse racing in Texas, died at his home in Fort Worth, December 11. The famous "Waggoner Pasture" covering thousands of acres in Wilbarger and adjoining counties in North Central Texas, is dotted with hundreds of oil wells, and traversed by miles and miles of pipe lines. The first well to strike oil was drilled for water. Two succeeding wells also produced oil which he used for dipping his cattle, and companies and independent operators then took over the drilling for oil, although many oil wells were drilled under the name of Waggoner. He also erected a refinery to which several thousand barrels of oil is run every day from the Waggoner Pasture.

ONTARIO GASOLINE REVENUE

TORONTO, Ontario, Dec. 15.—The revenue to the province of Ontario from the gasoline tax in November amounted to $1,391,128, compared with $932,902 in the same month last year. The increase of $458,226 reflects the recent efforts to tighten up the accounting system and eliminate gasoline bootlegging. T. B. McQuesten, minister of highways, has created a second revenue branch in his department known as the gas tax revenue department in charge of G. E. F. Smith, chief accountant and chief inspector of gas tax. Gas tanks, pumps and garage departments have been merged with the new branch. Methods of preventing evasion of the gasoline tax are being studied, as is the subject of metering refineries, for which existing legislation provides authority.

You are invited

—If you are a refiner without a cracking plant.

—If you have a cracking unit whose product disappoints your customers and whose operation threatens legal trouble for you.

—If you need advice and help on your other refinery operations to earn you better profits.

You are invited to call Parsons.

He has put more than one small refiner on the road to prosperity.

It will cost nothing to find out what he can do for you.

PARSONS

THE RALPH M. PARSONS CO.

MT. VERNON, OHIO

NATURAL GASOLINE MANUFACTURE

Texas Senate Tax Survey Considering New Levies

AUSTIN, Tex., Dec. 17.—The Texas Senate Tax Survey Committee is considering a variety of recommendations on natural gas taxation, and will work out its recommendations to the Forty-fourth State Legislature sometime after December 27.

It will be furnished a copy of the report of the Senate committee investigating the so-called "gas wastage" under the sour gas law, and the recommendations therein as a basis for higher gas taxes, including a price control tax to prevent intercompany sales below a fair market price.

Stanley Marsh, Amarillo, independent gas producer, has recommended that natural gas tax be retained on a percentage basis, but did not estimate a proper tax. He advocated provisions for ratable taking and protection of the fair market price. Bills embodying these same proposals are being drawn by individuals connected with the Senate committee. S. A. L. Morgan, of Amarillo, representing the large purchasers of gas for fuel purposes argued vigorously against any increase in the 2 per cent production tax. He pointed out that increased assessments on the value of the land has raised the tax burden of the natural gas industry $500,000 a year. He said a 1-cent flat tax would drive all the gasoline strippers out of business and "probably would" stop other production.

James E. Allison, of Breckenridge, attorney for Hammond gasoline and about 15 other plants, objected to the flat rate, and said the industry could stand possibly a 3 or 4 per cent levy.

B. C. D. Bynum, an Amarillo oil man, urged legislation to stop gas wastage and said divorcement of the pipe line carriers from the production end would probably be an effective measure of control. He suggested repeal of the sour gas law and substitution of one for common market in each pool, based upon acreage.

William McCraw, attorney general-elect, who will take office between January 1 and January 12, has announced appointment of Merton L. Harris of Smithville, a former district attorney, as assistant attorney general in charge of oil conservation enforcement with Headquarters in Kilgore.

ABSORPTION PLANT PROPOSED

CALGARY, Alberta, Dec. 17.—Royalite Oil Co., the major subsidiary of Imperial Oil, Ltd., in the Turner Valley Field, will likely undertake the construction of a second gasoline absorption plant to serve the south end of the field.

The company's first absorption plant, completed in May, 1933, takes production largely from the Central Field, and has materially increased the naphtha recovery from older wells. Its cost was around $500,000. This year Gas & Oil Products, Ltd., headed by A. H. Mayland, erected a plant on the Mercury lease in Section 4-19-2w5, which is taking production from independent companies in the older sections of South Turner Valley.

J. H. McLeod, production manager for the Royalite Oil Co., would not confirm nor deny the report.

CANADIAN IMPORTS

Imports of natural casinghead gasoline into Canada in August were recorded at 5,014,922 gallons worth $269,626; as compared with 4,338,961 gallons valued at $138,393 in July. Imports of gasoline lighter than .8235 specific gravity went up from 718,505 gallons worth $77,539 to 1,464,776 gallons worth $138,821.

Calculations Involving the Stripping of Natural Gasoline From Rich Oil

By GEORGE WEBER

In the absorption process as practiced in the manufacture of natural gasoline, there are two distinct steps. The first, the actual absorption of the natural gasoline in the oil, operates on such familiar physical laws that mathematics is easily applied to it. Likewise, the second or stripping process in which the absorbed natural gasoline is separated from the oil by fractionation lends itself to mathematical calculation.

For the solution of problems in the absorption step, an established procedure has been developed.[1] The analysis of the rich gas is used as the basis of computation. With the aid of the Vaporization Equilibrium Constants charts,[2] absorption factors and the ratio of mols of oil per mol of gas, the amount and composition of the gas absorbed together with other data can be found.

The stripping process operates in the exact reverse of the absorption process. Therefore the calculations involving stripping will be carried out in the same general manner as those for absorption, excepting that the absorption factor is reversed to become the stripping factor.

The value $\frac{y_{n+1} - y_1}{y_{n+1}}$ which in absorption represents the fraction of a component absorbed, is replaced by the fraction $\frac{x_o - x_n}{x_o}$ which is the amount stripped.

As the basis of any problem is generally a certain amount of the substance to be processed, this type is based on a certain number of mols of rich gas. The actual basis of the problem goes back to 100 mols of rich gas. This quantity of gas was found in a previous set of computations to yield 41.78 mols of rich oil.

For an example of calculation in the stripping process let it be assumed that a rich oil of the composition shown in Table 1 is sent through a stripper at a pressure of 48 pounds per square inch absolute, and at a temperature of 355° F. The stripper contains five perfect plates. This number is found by multiplying the number of actual plates by the efficiency factor quoted by the manufacturer.

With the use of the charts of Vapor Equilibrium Constants, or "K" charts as they are commonly called, the values of K or y/x for each component can be determined. Correction for the deviations from ideal solution equations is made by multiplying by the respective correction factors.

From practical experience it has been found that the oil at the given pressure and temperature conditions will not be entirely stripped of the normal pentane, but that approximately 2.5 per cent will remain with the oil throughout the process. This provides the data for the first step in the calculation of gasoline stripped. X_o is the pentane in the rich oil and X_n that in the lean oil. Therefore the factor $\frac{X_o - X_n}{X_o}$ represents the fraction of the pentane stripped out. The chart showing the relation of this fraction $\frac{X_o - X_n}{X_n}$ to S or $\frac{K_c V}{L}$ is next used to determine the latter factor. Then by dividing this value by the respective K_c for n-pentane, the ratio V/L or the mols of vapor per mol of liquid is found. This value, .339 in the example, being constant throughout the stripping tower, gives the necessary data to work back with the other components and to determine the mol per cent of each component vaporized in the tower.

By multiplying the mol per cent of each component which is stripped by the original quantity of that component, the actual number of mols of the vapor is determined. The lean oil contains the remaining fractions of the rich oil.

The composition of the natural gasoline stripped in this unit is shown in Table 2. The amount of lean oil in the product is negligible.

This is the fourth in a series of articles concerning the application of mathematical calculation to operations in natural gasoline manufacture.

[1]Computation of the Oil-Gas Ratio in Natural Gasoline Absorption Problem, The Oil and Gas Journal, Nov. 22, p. 32.

[2]The charts used in computing the data in the given example include those of Vaporization Equilibrium Constants, Absorption and Stripping Factors, Correction Factors for K values, and Molecular Weights of Petroleum Fractions. All are the result of work by George Granger Brown and Mott Souders of Ann Arbor, Mich.

TABLE 1—CALCULATIONS OF NATURAL GASOLINE STRIPPING
(Basis: 100 mols rich gas)

Comp.—	Mols	Mol %	K	Corr. factor	K_c	S, or VK_c/L	$\frac{X_o - X_n}{X_o}$	Mol % stripped	Mols vapor	Mols lean oil
C_1H_4	.32	.77	350	2.0	700	237	1.0	100.0	.32	0
C_2H_6	.38	.91	23	1.6	34.5	11.7	1.0	100.0	.38	0
C_3H_8	.40	.95	12.5	1.3	16.2	5.5	1.0	100.0	.40	0
i C_4H_{10}	.26	.61	8.1	1.3	10.5	3.56	1.0	100.0	.26	0
n C_4H_{10}	1.05	2.50	7.5	1.25	9.4	3.20	1.0	100.0	1.05	0
i C_5H_{12}	.82	1.95	5.3	1.25	6.6	2.24	.99	99.0	.81	.01
n C_5H_{12}	5.70	13.64	4.8	1.13	5.4	1.83	.975	97.5	5.56	.14
Lean oil:										
0-30%	9.82	23.54	.035	1.0	.035	.012	.012	1.2	.118	9.70
30-70%	13.20	31.60	.017	1.0	.017	.006	.006	.6	.079	13.12
70-100%	9.83	23.54	.010	1.0	.010	.003	.003	.3	.029	9.80
Total	41.78	100.00							9.006	32.77

TABLE 2—COMPOSITION OF PRODUCT

Component—	Mols	Mol fr.
C_1H_4	.32	.035
C_2H_6	.38	.042
C_3H_8	.40	.044
i C_4H_{10}	.26	.029
n C_4H_{10}	1.05	.115
i C_5H_{12}	.81	.09
n C_5H_{12}	5.54	.616
Lean oil:		
0-30%	.12	.013
30-70%	.08	.009
70-100%	.04	.004
	9.02	1.000

Code Exceptions Made for Natural Gasoline Plants

The approval of partial exemptions from the labor provisions of the oil code so as to permit several small natural gas gasoline plants in Oklahoma to work employes a maximum of eight hours a day for seven days a week, recommended by the Petroleum Labor Policy Board and the Planning and Coordination Committee, has been announced by Oil Administrator Harold L. Ickes.

The exemptions stipulate that none of the companies shall reduce the monthly wages or the number of men employed. Operators of the companies advised that unless the relief were granted they would be compelled to close down their plants, in which event every employe would lose his job.

The plants follow: Del Rey Gasoline Co., Tulsa, Okla.; Powers & Quinlan plants at Preston, Laden and Morris, Okla.; M. F. Powers' plant near Depew, Okla.

Operators of the plants filed statements showing their losses in support of their appeal for the partial exemption from the code provisions which stipulates that refinery employes shall not work more than 40 hours in any one week nor more than 72 hours in any two weeks, nor more than 16 hours in any two days.

COMPANY GIFTS DISAPPROVED

The Phillips Petroleum Co., leading manufacturer of natural gasoline, makes the following statement regarding the practice of supply houses in giving Christmas gifts to its employes:

"Several supply companies, service organizations, and others with which our company has been doing business, have been following the practice of giving Christmas presents to some of our officers and employes. The furnishing of elaborate entertainment or the presentation of Christmas gifts have for their purpose the influencing of the employe with respect to probable future business with the donor. Such actions thereby constitute unfair trade practices and, for this reason, if for no other, should be discontinued. Furthermore, such practice is inconsiderate on the part of the employe, because it places him in an embarrassing position through his feeling of obligation to the donor, and possible reciprocation of the favor at his own personal expense."

FINISHED MOTOR FUEL

Gas & Oil Products, Ltd., has equipped its natusal gasoline plant on the Mercury lease, Section 4-19-2w5 in the South Turner Valley field of Canada with fractionating towers and a stabilizing unit which permits the manufacture of low vapor pressure motor fuel and at the present time the plant is manufacturing and selling 10,000 Imperial gallons of 10-pound finished motor fuel daily.

EXPORTS FOR OCTOBER

Foreign shipments of natural gasoline for October amounted to 41,655 bbls., a decrease of 65,155 bbls. from the September figure. The following statistics of exports of petroleum and its products for the month of October, 1934, are furnished by the U. S. Department of Commerce:

	Bbls.
Natural gasoline	41,655
Petroleum	3,277,284
Gasoline	1,823,539
Illuminating oil	956,884
Gas oil	1,188,926
Fuel oil	907,124
Lubricating oil	484,369
Paraffin wax (pounds)	16,865,187
Petroleum asphalt (tons)	13,303
Petroleum coke (tons)	26,935

NEWS FOR PETROLEUM REFINERS

Rumanian Refiner Adopts Gray Treating Process

Installation by Creditul Minier of the Gray process for clay treating of cracked gasoline, in Rumania, is proceeding in accordance with arrangements recently completed between the two companies. The Creditul Minier installation is licensed in connection with their new (Dubbs) cracking unit. The process is regarded as superior to acid treatment of cracked gasoline in the preservation of octane rating and conservation of material treated while reducing gum content to minimum. Negotiated with Gray through their Rumanian agents, the firm of Herman Bensmann, the Creditul license is understood to be for a lump sum commuted fee, payable in monthly installments over an extended period. While satisfactory to the licensor, this arrangement works well for the licensee, who is enabled thereby to pay for a license out of economies and profits accruing through use of the process.

From the standpoint of such operations in Rumania, the Creditul installation marks the second Gray plant to be licensed. The towers of Steaua Romana, at Campina, have been in operation since the Fall of 1930. Subsequently Gray's licensing situation in Rumania as elsewhere has been improved by arrangements effected in 1933, whereby the Gray Processes Corp. licenses not only the Gray process, but also the R. K. Stratford (Imperial Oil) slurry clay treating method, the Osterstrom liquid phase method, and other clay treating developments of the Pure Oil Co., the Standard Oil Co. (Indiana), the Standard Development Co. and the Texas Co.

Bureau of Standards Adopts New Rating for Fuel Oil

On September 20, 1934, the Bureau of Standards at Washington circulated throughout the oil industry a Recommended Revision of Fuel Oils (second edition), Commercial Standard CS12-33 was circulated for written acceptance. Since that time a satisfactory majority of the industry has returned signed acceptances and the bureau announces that the revision, which will bear the title "Fuel Oils (third edition) Commercial Standard CS12-33", may be considered effective for new production on February 15, 1935. It is identical in substance with tentative standard D396-34T of the American Society of Testing Materials.

It may be well to note that although in the light of experience in the last heating season, the revision closes the major loopholes for unfair competition, there is ample evidence of the need for additional information and activity toward the better adaptation of fuel oils and burners to each other. A printed pamphlet of the revision will be sent to each acceptor when it becomes available.

START RAIL SHIPMENTS

With the close of the navigation season on the Great Lakes, crude oil shipments from the Bay City storage terminal to refineries at Toledo, Cleveland and other points will be made by railroad tank car. The Pure Oil Co.'s new loading rack virtually doubles the capacity for handling this type of shipments. During the 1934 navigation season Pure averaged 36 lake tanker shipments a month averaging 16,000 bbls. to the cargo.

Material Gain Reported in Demand for Domestic Heating Oils During 1933

Marketers of domestic heating oils are greatly encouraged by the marked yearly gain in utilization of this form of fuel. Anticipation of a record winter market is supported by a report recently issued by the United States Bureau of Mines. This report covers the demand for heating oils over the four-year period ending January, 1934.

A steadily growing demand for range oil and domestic heating oils during 1933 is indicated by reports submitted to the Bureau of Mines by petroleum refiners. Deliveries of range oil increased 44.0 per cent, or from 6,841,000 bbls. in 1932 to 9,849,000 bbls. in 1933. With average prices for domestic heating oils but slightly higher in 1933 than in 1932, with unusually cold weather prevailing in most parts of the country where oil burners are used extensively, and with about 75,000 new domestic burner installations requiring fuel, sales of domestic heating oils—grades No. 1 to No. 4 including furnace oils—were nearly 5,000,000 bbls. above the 1932 total. The reported deliveries of these oils in 1933 were 34,140,000 bbls., or 16.7 per cent above total deliveries of 29,264,000 bbls. in 1932.

The use of range oil, an oil of about 40-43 gravity with many of the characteristics of kerosene, has been confined chiefly to New England; however, there is a growing demand for this grade of oil in New York State and in the rural communities of the northern tier of the Central states, where natural gas is not readily available.

In compiling data on the distribution of fuel oil for the Bureau of Mines, some refiners have experienced difficulty in breaking down their sales of light heating oils into "furnace oil" and "domestic heating oils." Because of this it is no longer possible for the Bureau of Mines to maintain separate classifications, hence "furnace oil" is now included under the general grouping of domestic heating oils, or grades No. 1 to No. 4.

The total deliveries of 34,140,000 bbls. of domestic heating oils represent a gain of 16.7 per cent above those of 1932 compared with a gain of 17.8 per cent in 1932 over 1931, but a decline of 3.6 per cent in 1931 from 1930. The substantial gain in sales of range oil and domestic fuel oils in 1933 appears to bear out the contention that the average prospective customer for an oil burner regards the price of the oil as secondary to the factor of convenience. In general, the increased cost of the fuel has been returned to the owners of oil burners in the form of increased mechanical efficiency; furthermore, the latest type of burners utilize heavier grades of oil than the burners of several years ago, thus effecting a saving in fuel costs.

The following table shows deliveries of range oil and domestic heating oils during 1933 in comparison with similar data for 1931 and 1932.

DELIVERIES OF RANGE OIL AND DOMESTIC HEATING OILS, 1931-1933
(Barrels of 42 gallons)

	1931	1932	1933
Range oil ..	4,549,000	6,841,000	9,849,000
Inc. over previous year, %	.....	50.4	44.0
Domes. heating oils	24,848,000	29,264,000	34,140,000
Inc. over previous yaer, %	*3.6	17.8	16.7

*Decrease.

Southern Louisiana Grade Oils Analyzed by Bureau

For a number of years the Bureau of Mines has been conducting an investigation of crude petroleum from producing fields in the United States and the western hemisphere and has published a series of reports on these fields. The most recent report covers the 14 fields in 10 parishes in the southern part of Louisiana, usually designated as "Louisiana Gulf Coast area." Analyses of these crudes is incorporated in Bulletin R.I. 3,253, available from the Bureau of Mines.

The crude analyses numbering 26 in all include 8 crude oils of naphthene base, crude oils of naphthene-intermediate base, and 10 crudes of intermediate base. Of these analyses 16 show wax to be absent. The analyses show considerable variation in the physical and chemical properties of the various crudes.

NEW EAST TEXAS PLANT

A. Goldman and others are building a 2,000-bbl. refinery on the Crabtree and Jeffries' Giles lease in the Pru Survey, Rusk County. The plant will operate under the name of the Zulia Refining Co.

TAX ORDERED ON FUEL LOSS

Standard Oil Co. of Indiana was ordered December 14 by Federal Judge Edward J. Moinet of Detroit to pay the state of Michigan $95,249 covering tax on gasoline lost through seepage, evaporation, etc., between the time the gasoline was received at and shipped from its distributing plants in the years 1927 and 1928. No tax was paid on such losses in this period under an agreement entered into with the state, which has since been held illegal. The company plans to appeal the case.

BUILD NEW PLANT

WICHITA FALLS, Dec. 17.—W. Lewis Barclay and S. J. Holt of Wichita Falls will construct a refinery on the Payne property about five miles southwest of Wichita Falls on the Seymour Road.

The plant is expected to be completed within 60 days, will have a daily capacity of 150 barrels and manufacture gasoline, naphtha and distillates.

CANADIAN TAXES

EDMONTON, Alberta, Dec. 15.—The Alberta Motor Association submitted to the tax inquiry committee here a brief declaring that motor vehicle owners are subject to excessive taxation.

The brief suggests that motor license fees should be nominal and for purposes of registration and regulation only; that revenue for road construction and maintenance should be raised by a fuel oil and gasoline tax; and that revenue from this tax should be devoted solely to these purposes. Refund of the gasoline tax for fuel used for agricultural purposes should be abolished, and the present tax reduced; while the license year should coincide with the fiscal year of the province.

It was pointed out that since 1923 the province had collected $12,023,201 in gasoline tax and $16,349,051 in motor licenses, while less than half that sum had been spent on roads and bridges.

Decision to be Appealed in Cracking Patent Suit

On December 11, 1934, Federal Judge John P. Barnes handed down at Chicago the decision that the Globe Oil & Refining Co. did not infringe two patents of the Standard Oil Co. (Indiana), and further, that these patents were invalid in view of the prior art.

The patents in suit were the Lewis and Cooke patent which covered the use of a "bubble tower" directly connected to the cracking unit, and the Shaeffer and Brown patent which covered generally the cracking apparatus used by the Globe Oil & Refining Co. at its Lamont, Ill., refinery. The suit was tried before Judge Barnes in the spring of 1934.

Judge Barnes adopted the findings of fact and conclusions of law submitted by the defendant in toto. It is certain that Standard will appeal.

In passing, it may be remarked that Universal Oil Products Co. of Chicago New York recently sustained one of its patents against a cracking unit of the same type operated by the Root Refining Co., and this case is now also on appeal. A case involving a charge of infringement of patents held by Gasoline Products Co. of New York by a refinery employing the same general type of cracking process was recently tried at Santa Fe, New Mexico, before Judge Bratton, former United States Senator from the State of New Mexico. No decision has yet been handed down in this case.

Allowable Motor Fuel Production for January

WASHINGTON, Dec. 17.—The allowable refinery gasoline production for January by districts has been approved by the Planning and Coordination Committee for the respective districts as follows:

	Allowable gasoline production in Jan. (barrels)
East Coast	5,510,000
Appalachian	1,517,000
Ind.-Ill. and Ky.	5,453,000
Okla.-Kan. and Mo.	4,977,000
Inland Texas	2,266,000
Texas Gulf	6,963,000
East Texas	468,000
Louisiana Gulf	1,264,000
No. La.-Ark., Miss.	708,000
Rocky Mountain	750,000
California	4,874,000
Total United States ...	434,750,000

MICHIGAN REFINERY PLANNED

Delbert Fortney of Mt. Pleasant and a group of associates are planning to erect a new Michigan refinery, it was reported last week.

Money for the new venture already has been subscribed for the plant. Bay City is reported to be one of several cities being considered for the site.

Several officials of the Strange and Fortney Oil Co. are said to be interested in the project as an outlet for their crude. It has not yet been decided whether a skimming or cracking plant will be erected.

Two Michigan refineries are now engaged in construction programs nearing completion, namely: the new McClanahan refinery at St. Louis, Mich., and installation of two new boilers in the Roosevelt refinery in Mt. Pleasant.

Apex Gasoline Co. also is nearing completion of its new casinghead plant in Section 17, Porter Township Midland County, Michigan's largest oil field.

Chicago District Spot Gasoline Market Continues Depressed and Uncertain

By SPECIAL CORRESPONDENT

CHICAGO, Dec. 17.—With large-scale purchases of tank car gasoline believed possible on the part of major interests in the event prices declined much lower, values in the spot gasoline market over the week-end continued rather depressed and uncertain, with the price situation in the balance. Jobbers have been a negligible factor in refinery market buying in the last week or two, as for some time prior, but for a different reason. Now, many jobbers in the central states are finding their local tank wagon and service station markets restored to normal or near normal levels, so that theoretically they note the pressure under which they long have operated has been eased. This pressure has been stated to be to reason for minimum spot purchases for a long time.

There are now other reasons keeping the jobbers out of the tank car market. For one thing, somewhat unfavorable weather is reducing consumption and cutting jobber gallonage. Jobbers are working to keep their year-end inventories at a comparatively low level. All in all, it is unfortunate from the standpoint of values in the spot market that the market stabilization developments could not have come before the period of low consumption.

Opinion Divided

Opinion appears somewhat divided over the outlook. A great deal depends upon the extent to which it is found possible to maintain the recently advanced wagon and retail prices on gasoline, kerosene and other products in this territory. Reports appear a little conflicting. A good many major companies are trying to use more caution in meeting reported price cuts from the restored normal prices, and the entire force of the marketing trade seems more than ever bent toward maintaining prices. In the outlying, smaller points and rural regions a good deal of success is attending these efforts, although some reports from larger metropolitan areas are none too encouraging.

Rumors continue as to the Chicago situation, which has been one of the most difficult in the territory. One is that renewed efforts are to be concentrated to get it back to normal on service station soon. Some skeptics consider the time not propitious. At any rate, some jobbers continue to discuss the possibilities of advancing the tank car price to discourage potential tank wagon and service station price cuts.

Commercial Business

Large commercial consumers already are trying to drive better bargains than they have had for purchase of tank wagon deliveries of gasoline, in view of relaxation of the CD-1 contracts. It is believed, however, that major companies are staying fairly well together on new plans, which contemplate discounts near the old scale. It is reported here that Standard Oil Co. (Indiana) around January 1 will discontinue its "fourth grade" gasoline, a better-than-third-grade product it has sold exclusively to the commercial trade; also that Standard will lower octane number of its third-grade gasoline to 57 or less, to discourage its use.

Heating Oils

Heating oils once more are commanding a large share of the trade's attention. Available supplies, in view of the continued tight control of the East Texas Field, remain limited and demand has been quite good at all times, despite the fact that no zero weather has hit the central region as a whole. Movement of

(Continued on Page 44)

Crude Oil Prices

(Continued from Page 29)

Humble Oil & Refining Co. and Texas Co. Effective September 20 in Salt Flat by Shell Petroleum Corp.

Rocky Mountain States

Ile, light (Sept. 29, 1933)	$.96
Ile, heavy (Sept. 29, 1933)	.90
Florence, Colo. (June 17, 1933)	.80
Fort Collins and Wellington, Colo. (June 17)	(See Salt Creek prices)
Big Muddy (Sept. 29, 1933)	1.01
Frannie, light (May 1, 1934)	.70
Frannie, heavy (Sept. 29, 1933)	.62
Salt Creek and LaBarge (Sept. 9, 1933)	See Stanolind Mid-Continent price schedule
Grass Creek, light (Sept. 29, 1933)	1.18
Grass Creek, heavy (Dec. 15, 1932)	.45
Elk Basin (Sept. 29, 1933)	1.18
Rock Creek (Sept. 29, 1933)	1.02
Dutton Creek (July 8, 1933)	See Mid-Continent gravity prices
Lance Creek (Dec. 16, 1932)	.92
Poison Spider (Mar. 15, 1931)	.70
Hudson (June 2, 1931)	.65
Lander (Mar. 5, 1931)	.40
Rex Lake (Feb. 22, 1930)	1.10
Osage	1.03
Lost Soldier (Sept. 30, 1933)	.88
Hamilton Dome:	
Below 18° (July 1, 1934)	.52
18° and above (July 1, 1934)	.62
Torchlight (Sept. 29, 1933)	1.15
Greybull (Sept. 29, 1933)	1.18
Pondera	1.15
Sunburst (Sept. 29, 1933)	1.35
Cat Creek, Montana	1.07
Hogback (Sept. 29, 1933)	1.11
Lea County, N. Mex. (Sept. 29, 1933)	.75
Maljamar (Sept. 29, 1933)	.70
Artesia-Jackson (Dec. 1, 1933)*	.75

Note—Salt Creek, Torchlight, Elk Basin, Grass Creek, Frannie, Greybull, Hogback and Ile s by Stanolind Oil & Gas Co. Elk Basin, Grass Creek light, Big Muddy, Rock Creek and Sunburst by Ohio Oil Co. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Lea County, effective September 29, 1933, by Humble Oil & Refining Co. and other buyers; Fort Collins, Wellington, Orchard, Florence, Big Muddy, Cat Creek, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro. Hamilton Dome, Wyo., by Stanolind Oil & Gas Co.

*Continental Oil Co.

North Louisiana and Arkansas

Smackover, Ark. (all grades)	$.70
Tullos, Urania, La. (Jan. 13, 1934)	.57
Nevada, Ark. (Sept. 29, 1933)	.60
East El Dorado (Sept. 29, 1933)	.70
Converse, La. (Mar. 17, 1934)	1.03
Elm Grove, La. (Sept. 29, 1933)	.75
Holly, La. (Nov. 17, 1934)	1.03
Pleasant Hill, La. (Mar. 17, 1934)	1.02
Zwolle, La. (Mar. 17, 1934)	1.03
Champagnolle, Ark. (Mar. 17, 1934)	.81
Lisbon, Ark. (Mar. 17, 1934)	1.03
Stephens, Ark. (Sept. 29, 1933)	.70
Urbana, Ark. (Mar. 17, 1934)	.60
Other fields	(See gravity table)

Note—Smackover: Effective September 29, 1933, Texas Co., Magnolia Petroleum Co., Standard of Louisiana, Louisiana Oil Refining Corp., Gulf Refining Co. and Phillips Petroleum Co. East El Dorado posted by Magnolia Petroleum Co. and Gulf Refining Co., Nevada by Standard Oil Co. of Louisiana. Urbana posted by H. L. Hunt, Inc., and Louisiana Oil Refining Co. Converse, Holly, Zwolle and Urbana by Standard Oil Co. of Louisiana; Elm Grove by Simmons Oil & Refining Co.; Pleasant Hill by Standard Oil Co. and Magnolia Petroleum Co. Champagnolle by Standard Oil Co. and Lion Oil & Refining Co.

Eastern States

TIDE WATER PIPE CO.
(Effective Dec. 6, 1934)

Bradford, Pa.	$2.05
Allegany, N. Y.	2.05

SOUTH PENN OIL CO.
(Effective Dec. 6, 1934)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field)	$2.05
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	1.72
Pennsylvania Grade Oil in Eureka Pipe Line lines	1.67
Pennsylvania Grade Oil in Buckeye Pipe Line lines	1.57
Corning Grade Oil in Buckeye Pipe Line Co.'s lines (Oct. 2, 1933)	1.37

PENNZOIL CO.
(Effective Dec. 6, 1934)

Pennsylvania Grade Oil in National Transit Lines:	
Group A (Includes Cochran, Franklin, Hamilton and Doolittle districts.)	$1.97
Group B (Includes Titusville district.)	1.96
Group C (Includes Turkey and Tidioute districts.)	1.95
Group D (Includes Bear Creek and Porkey districts.)	1.94
Group E (Includes Eldeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jameson, Kennerdell, Emlenton, Tiona, Lacey and Kinzua districts. Price depends on length of pipe line haul to plant at Oil City.	1.91

PURE OIL CO.
(Effective Dec. 6, 1934)

Cabin Creek, W. Va.	$1.67
Bradford Hollow, W. Va.	1.67
Kelly Creek, W. Va.	1.62

CREW-LEVICK CO.
(Effective Dec. 6, 1934)

Oil City-Titusville	1.97

Middle Western States

OHIO OIL CO.
(Effective September 29, 1933)

Lima	$1.30
Illinois (Jan. 5, 1934)	1.13
Princeton, Ind. (Jan. 5, 1934)	1.13
Plymouth	Shut in
Western Kentucky (May 26, 1934)	1.88
Midland, Mich. (Sept. 30, 1933)*	1.02
West Branch, Mich.	.88
Oceana, Mich. (Oct. 5, 1933)	.90
Somerset, Ky. (Sept. 30, 1933)	1.23

*Posted by Pure Oil Co. and Simrall Pipe Line Co. Producers Pipe Line Co. pays 5 cents per barrel over Pure Oil Co.'s posted prices. West Branch, Mich., posted by Simrall Pipe Line Co. Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and posted price includes premium. Oceana posted by Old Dutch Refining Co. and Naph-Sol Refining Co.

Canada

Ontario (September 9, 1933):	
Petrolia*	$2.10
Oil Springs	2.17
Turner Valley (May 21, 1934):†	
Clear naphtha	$2.55
Discolored naphtha	2.37
Crude oil, 50 gravity	2.19
Crude oil, 45 to 49.9	2.07
Crude oil, 40 to 44.9	1.50

*Imperial Oil, Ltd. †Imperial Oil, Ltd. and Regal Oil & Refining Co.

Mexico

Panuco*	$1.00

*F.o.b. ship, based on November transactions and exclusive of production and export taxes and bar dues.

California Crude Oil Prices

STANDARD OIL CO. OF CALIFORNIA
(Effective September 6, 1933)

For current purchases of crude oil at the well (unless otherwise specified). (All gravities above those quoted take highest price offered in that field.)

Gravity—	Long Beach	Seal Beach, Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda, Brea Canyon	Athens-Rosecrans	Torrance	Richfield	Whittier, La Habra	Montebello	Santa Fe Springs	La Habra-Coyote	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Coalings	Coyote
14-14.9	$.65	$.65	$.65	$.65	$.65	$.65	....	$.65	$.65	$.65	$.65	....	$.65	$.57	$.57	$.57	$.65
15-15.9	.65	.65	.69	.69	.66	.69	....	.66	.65	.66	.65	....	.65	....	....	..	65
16-16.9	.66	.66	.72	.72	.69	.73	....	.69	.67	.68	.65	....	.65	....	....	..	65
17-17.9	.69	.65	.75	.76	.73	.76	....	.72	.70	.71	.65	....	.68	....	....	....	6h
18-18.9	.72	.65	.78	.80	.76	.79	....	.75	.74	.74	.65	....	.71	.61	.61	.59	.71
19-19.9	.75	.65	.81	.83	.80	.82	....	.78	.78	.78	.65	..	.74	.64	.65	.62	.74
20-20.9	.78	.68	.88	.87	.83	.85	....	.81	.82	.81	.66	....	.78	.67	.69	.65	.78
21-21.9	.81	.72	.86	.90	.87	.88	....	.83	.85	.84	.69	$.72	.81	.70	.72	.68	.81
22-22.9	.84	.76	.89	.94	.90	.92	....	.85	.89	.87	.72	.76	.84	.73	.76	.72	.84
23-23.9	.88	.81	.92	.97	.94	.95	$.83	.89	.92	.90	.76	.79	.87	.77	.79	.75	.87
24-24.9	.91	.85	.95	1.01	.97	.98	.86	.92	.97	.93	.80	.83	.90	.81	.82	.78	.90
25-25.9	.94	.89	.98	....	1.00	1.01	.90	.95	1.00	....	.85	.87	.93	.85	.85	.81	93
26-26.9	.97	.93	1.01	....	1.04	1.04	.94	.98	1.04	....	.89	.90	.96	.89	.88	....	96
27-27.9	1.00	.98	1.04	....	..	1.07	.97	....	1.08	....	....	.94	.99	.93	.91	....	99
28-28.9	1.03	1.02	1.07	....	....	1.10	1.01	....	1.11	..	....	.98	1.02	.97	.94	..	1 02
29-29.9	1.06	1.05	1.09	....	....	....	1.04	....	1.15	....	....	1.01	1.05	1.01	.97	....	1 05
30-30.9	1.09	1.10	1.12	....	....	....	1.08	....	....	....	....	1.05	1.09	1.05	1.00	....	1 09
31-31.9	....	....	....	....	....	..	1.12	....	....	....	..	1.08	1 12	1.09	....	....	1 12
32-32.9	....	....	....	....	....	....	1.15	....	....	..	....	1 12	1 15	1.13	....		1 15
33-33.9	....	....	....	....	....	....	....	....	....	....	....	1.16	1.18	1.17	....	..	1 18
34-34.9	....	....	....	....	....	....	....	....	....	....	....	1.19	1.21	....	....	....	1 21
35-35.9	....	....	....	....	....	....	....	....	....	....	....	1.23	....	....	....	....	..
36-36.9	....	....	....	....	....	....	....	....	....	....	..	1.26	....	....	....	....	..
37-37.9	....	....	....	....	....	....	....	....	....	....	....	1.30	....	....	....	....	..
38-38.9	....	....	....	....	....	....	....	....	....	....	....	1.34	..	....	....	....	....

Additional Standard Oil Quotations

Mountain View—Effective July 3, 1934, the following are the pri of the Standard Oil Co. of California for its current purchases of crude oil at the well in the Mountain View Field: 14 to 19.9 degrees, 57 cents; 20-20.9, 58 cents; 21-21.9, 59 cents; 22-22.9, 61 cents; 23-23.9, 63 cents; 24-24.9, 66 cents; 25-25.9, 69 cents; 26-26.9, 72 cents; 27-27.9, 75 cents; 28-28.9, 78 cents; 29-29.9, 81 cents; 30-30.9, 84 cents; 31-31.9, 87 cents; 32-32.9, 90 cents; 33 degrees and above, 93 cents.

Elwood Terrace—F.o.b. ship, 33 degrees, $1.03; 34 degrees, $1.06; 35-35.9, $1.09; 36-36.9, $1.12; 37 degrees and over, $1.15

Newhall—14 degrees and over, 57 cents.

McKittrick and Kern River—14 degrees and over, 57 cents.

Wheeler Ridge—14 to 17.9 degrees, 57 cents; 18-18.9, 58 cents; 19 19.9, 61 cents; 20-20.9, 64 cents; 21-21.9, 67 cents; 22-22.9, 70 cents; 23-23.9, 73 cents; 24-24.9, 76 cents; 25 degrees and over, 79 cents.

Kettleman Hills—33-33.9 degrees, 93 cents; 34-34.9, 96 cents; 35-35.9, 99 cents; 36-36.9, $1.02; 37-37.9 $1.05; 38-38.9, $1.08; 39 degrees and over, $1.11.

The Texas Co. posted in Shiells Canyon, South Mountain and Santa Paula as follows: 14 to 17.9, 57 cents; 3 cents added for each degree up to and including 26-26.9 degrees at 84 cents; then 4 cen added for each degree up to and including 30 degrees and over at $1. Company posts Standard Oil Co.'s Montebello prices in Montebello and North Whittier, and posts Standard Oil Co. prices in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield and Santa Fe Springs, all effective September 6.

General Petroleum Co. posts Standard Oil Co. prices in Athens, Rosecrans and Signal Hill; Alamitos Heights up to 26-26.9; Santa Fe Springs up to 35-35.9; Richfield up to 25-25.9; Brea Canyon an Olinda up to 25-25.9, and Torrance up to 25-25.9.

Union Oil Co., effective September 6, posts same price as Standard Oil Co. in all fields in which both purchase, excepting that in Athens-Rosecrans, Union Oil Co. posts 21-21.9, 72 cents, and 33-33.9, $1.18; 34-34.9, $1.21, and 35-35.9, $1.24.

Associated Oil Co., effective September 6, posted same prices for the same grades as Standard Oil Co. of California, excepting that in some fields its gravity scale stops as follows: Huntington Beach, 26 degrees and over; Seal Beach and Alamitos Heights, 36 degrees and over; Coyote Hills, 33 degrees and over; Richfield, 25 degrees and over; Torrance, 35 degrees and over; Inglewood, 34 degrees and over; Santa Fe Springs, 35 degrees and over; Midway-Sunset, Elk Hills, Buena Vista Hills, 30 degrees and over. Also Associated pays 52 cents for oil of 11 to 12.9 gravity in McKittrick, Kern Front, Kern River, Midway-Sunset, Elk Hills, Buena Vista Hills and Coalings.

Two Favorable Wildcats in Brazoria and Waller Feature Developments in Gulf Coast District

By F. L. SINGLETON
Gulf Coast Bureau, The Oil and Gas Journal

HOUSTON, Tex., Dec. 17.—The favorable appearance of two wildcat tests being drilled simultaneously by Stanolind Oil & Gas Co., one in Brazoria County and the other in Waller County, were the featured developments on the Gulf Coast the past week.

Of most importance is No. 1 J. W. Surface, in the Friendswood area, northeastern part of Brazoria County in the W. T. Hughes Survey No. 2. Very little information is being given out at the well, but it is known the operators were running 9⅝-inch casing, and it is expected a test will be made during the week. The hole is bottomed at 5,990 feet, thought to be in the Marginulina, reported topped at 5,821 feet. A showing of gas was said to have been encountered in sand from 5,948-71 feet and a soft saturated sand from 5,980-90 feet. Casing will be cemented at 5,975 feet.

Based on the top of the Discorbis and Marginulina, the test is reported to be running several hundred feet higher than Texina Oil Co.'s No. 1 Goard, a few miles northeast in Harris County, abandoned as a dry hole at 6,077 feet.

The test is on a large block of approximately 7,000 acres, with Standard Oil Co. of Kansas and Humble Oil & Refining Co. owning the nearest protection acreage. Humble Oil & Refining Co. closed a deal with Standard Oil Co. of Kansas the past week for approximately 1,250 acres. Total consideration was reported to have been $250,000 cash, with Standard Oil Co. of Kansas retaining a one-twenty-fourth overriding interest. Close-in royalty is reported to be selling as high as $200 and $400 per acre.

In the same county, and in the J. B. Bailey Survey, Holt and others' No. 1 Griffith, a wildcat test which has been shut down for several months at a ttoal depth of 4,173 feet, is reported to be rigging up to resume operations.

Waller County

The other wildcat test creating considerable interest is Stanolind Oil & Gas Co.'s No. 1 J. W. Thorp, southeastern part of Waller County, in the J. M. Bennett Survey No. 100. Late in the week it was coring in shale below 6,260 feet and is generally conceded to be running about 250 feet higher than the company's No. 1 Manor, a few miles north in the H.&T.C. Survey No. 64, abandoned this year at a total depth of 6,713 feet. No. 1 Thorp topped the Dibollensis at 5,898 feet and is reported to be definitely in the Cockfield, although the top has not been picked.

In the same county, but on the San Felipe Dome, Seaport Oil Co.'s No. 1 J. W. Avery, due south of the discovery, in the John McFarland Survey, has been deepened 5 feet to a total depth of 2,883 feet, and the operators were running screen and liner for a test late in the week. The well was deepened after it failed to flow, and pumped only 25 bbls. per day.

Much interest was being centered on Atkins' and O'Neil's No. 1 W. L. Hodges, a wildcat in block 1, I. & G. N. R. R. survey, lot 8, which encountered a showing of oil and gas at a total depth of 5,281 feet. The operators have made three unsuccessful drill stem tests, and only recovered 400 feet of drilling mud, with a slight taste of oil in first thribble, with no taste of salt water present. Late in the week the operators were taking another core from 5,281 to 5,285 feet.

Polk County

Two miles east of the Livingston Field, Polk County, C. & C. Drilling Co. has made location for No. 1 Granbury and Smith, 600 feet north and 600 feet west from most western northwest corner of Gulf Production Co.'s Granbury and Smith lease, in the William Shadburn Survey. It is reported Bergman and others gave 220 acres and $1,000 cash and Gulf Production Co. $1,500 cash as bottom hole money for this test to be drilled to the Cockfield. Operators are clearing location.

In the Livingston Field, B. M. York and others have abandoned No. 1 Kingsbury County Holding Corp., in tract 19, in salt water sand at a total depth of 4,358 feet. Operators have made location for No. 3 Kingsbury County Holding Corp., same tract. A. Viesca Survey, approximately 150 feet north of No. 1. Gem Oil Co. has made location for No. 6 Davis and Holmes, 652 feet from the west line and 662 feet from the north line of lease in the A. Viesca Survey.

Liberty County

Gulf Production Co.'s No. 7-C Kirby, in the Cleveland Field, Liberty County, made an 11-minute drill stem test from 5,847-53 feet, through a quarter-inch choke on top and bottom and tested two thribbles of oil cut with drilling mud, and eight thribbles of salt water, with no pressure. The hole is bottomed at 5,986 feet in shale, with streaks of sand, and has the appearance of making a failure. The operators are plugging back to 5,650 and will core a new hole to 5,851 feet, where they will make another test. In a previous core from 5,847-51 feet, operators recovered four feet of medium fine grained sand, with a showing of oil and gas. Black Gold Petroleum Co. made location for No. 2 R. D. McDonald in the Tom Devers Survey, 933 feet north of its No. 1 staked last week. No. 2 McDonald offsets Gulf Production Co.'s No. 7-C Kirby, but will probably not be drilled unless No. 7-C Kirby is completed as a producer.

In the Hardin District, 11 miles north of Liberty, Liberty County, the wildcat of Turnbull and Irwin's No. 1 Lynott and Buffum in the James Robeson Survey was given another test. With the seat at 7,428 feet, and the tool open 20 minutes, it tested a small amount of gas, with no pressure and 34½ stands of mud and salt water through a quarter-inch choke on top and bottom. It is shut down at 7,511 feet, total depth, and will probably be abandoned.

Kittrell Field

Boone Brothers' No. 2 Trinity State Bank assured the Kittrell Field of its fourth producer during the week, when it tested 750 feet of clean oil through a ½-inch choke on top and bottom on a 10-minute drill stem test from 1,992-2,000 feet total depth. The operators have cemented 7-inch casing at 1,992 feet, and the well will be completed the first part of the week. This is the second producer for the operators, who discovered the field a few months ago, and it extends the field a few hundred feet southwest. W. A. Kiels has made a location for No. 1 L. W. Huffman, in the center of the Huffman tract, west of the discovery. In the same county, but several miles northeast of the field, along the Houston County line, Gem Oil Co. has made location for its No. 1 A. Buffington and others, 1,000 feet from north and 1,200 feet from most eastern west line of 165.9 acre tract in the J. M. Prado Survey.

Walker County

Over the line in Walker County, 10 miles southwest of the Kittrell Field, The Texas Co. has abandoned its No.

(Continued on Page 45)

Wildcat Operations on Gulf Coast

Week Ending December 15

RACCOON BEND—AUSTIN COUNTY

Humble O. & R. Co.'s No. 5-X Helmuth, 315 ft. at R/A from W line, 313 ft. at R/A from SW line, 96 ft. from No. 3. 16-in. csg. at 128 ft.

Humble O. & R. Co.'s No. 11-X Woodley. Coring sand 4,220 ft.

Humble O. & R. Co.'s No. 1 Hill, Wm. C. White Sur. Location.

Humble O. & R. Co.'s No. 10 Arthur Marten, 315 ft. from SE and 313 ft. from SW line of lease, Wm. C. White Sur. Rigging up.

Humble O. & R. Co.'s No. 8-X Sanders, 783 ft. at R/A from N line, 250 ft. at R/A from most easterly line, Wm. C. White Sur. T.D. 4,420 ft.; P.B. to 3,220 ft.; 7-in. csg. at 3,159 ft.

Humble O. & R. Co.'s No. 2-X Zeiske, 949 ft. northeasterly along SE line, 331 ft. northwesterly from SE line, Wm. C. White Sur. Abd. 4,316 ft.

DANBURY—BRAZORIA COUNTY

Shell Pet. Corp.'s No. 7 Blakely-Winston, 63 deg. 11 min. E, 5,540 ft. N, 36 deg. 49 min. W, 300 ft. from SW cor. of Blakely-Winston 640-acre tract, H.T.&B. Sur. Coring lime 4,368 ft.

Shell Pet. Corp.'s No. 3 Haury, 300 ft. SE of No. 2 in line with No. 2 and No. 1 Blakely-Winston, H.&T.B. Sur. No. 12. Coring hard sand 7,168 ft.

DAMON MOUND—BRAZORIA COUNTY

Gulf Stream, Inc.'s No. 1 Cave Heirs, 140 ft. from N line and 60 ft. from E line of Lot C, Blk. 50, A. Darst Sur. Running 7-in. csg.; T.D. 1,312 ft.

Seco's No. 1-D Wisdom, 35 ft. from S and W lines of Blk. D, Lot 5, A. Darst Sur. No report.

Intercoastal Oil Co.'s No. 12 Wisdom, 90 ft from N line and 35 ft. from W line of Lot A, Blk. 51, A. Darst Sur. T.D. 2,922 ft.; preparing to pump.

MANVEL—BRAZORIA COUNTY

Bowles & Barsodi's No. 1 Norvell Investment Co. in center of Lot 47, H.&T. Sur. No. 33. Location.

Texas Co.'s No. 13 Houston Oil Field Association, 990.5 ft. N, 48 deg. W, 265 ft. N, 42 deg. E of S cor. of Lot No. 11, A.C.H.&B. Sur. No. 91. Derrick.

Texas Co.'s No. 2 O. L. Rash, 990 ft. S, 48 deg. E, 330 ft. S, 42 deg. W of N cor. of lease, Thomas Sproggins Sur. Derrick.

Texas Co.'s No. 1 Dolmolin, 330 ft. N, 48 deg. W, 330 ft. S, 42 deg. W, from E cor. of Charles O'Donnell Sur. No. 74, H.T.&B. Sur. T.D. 1,435 ft.; cmtd. 10-in. csg. 1,431 ft.

Texas Co.'s No. 1 Joe Grace, 200 ft. S, 300 ft. W of NE cor. of lease, Lot 7, Charles O'Donnell Sur. No. 74. Rig up.

(Continued on Page 82)

MERRY CHRISTMAS
and
HAPPY NEW YEAR

To our many friends everywhere we send sincere greetings for a joyous Holiday Season.

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New Shallow Gas Field in Northwestern Duval; Proposed Development Along Jackson Trend

SAN ANTONIO, Tex., Dec. 17.—The discovery of a new shallow gas field in northwestern Duval County, and the proposed development of several large blocks of acreage along the Jackson trend, were the most important developments in the Southwest Texas district.

Mills Bennett Production Co.'s No. 1 Duval County Ranch Co., a wildcat 5 miles west of the south end of the Government Wells Field, came in for an estimated 15,000,000 feet of gas daily from a total depth of 1,505 feet, flowing through a three-sixteenths inch choke with 525 pounds of pressure. The test is in Survey 192, on a trend parallel to that of the Government Wells Pools. The test was originally drilled to 3,005 feet, and was plugged back to its present depth.

Several large blocks are being taken throughout the district, and some interesting tests are to be drilled in the near future. In Jim Hogg County, French Oil Co. has assembled a block of acreage northeast of the Randado Field, and will start a test to the Mirando sand within a few weeks. Acreage spreads are being sold at a reported price of $7.50 per acre.

In the northwestern part of Jim Wells County, along the Jackson trend, Shira and Berr of San Antonio have taken a block of 5,300 acres and will make location for a 5,000-foot test.

Southwest Texas District

Average daily production for the week ending December 11:

SAN ANTONIO DISTRICT

Field and county—	Bbls.
Darst Creek, Guadalupe	9,105
Luling, Caldwell	5,271
Salt Flat (Brunner), Caldwell	4,503
Other pools	4,626
Total San Antonio district	23,505

LAREDO DISTRICT

Field and county—	Bbls.
Cole, West-Duval	1,403
Escobas, Zapata	2,407
Government Wells, Duval	19,161
Sam Fordyce, Hidalgo	2,052
Other pools	6,298
Total Laredo district	31,321
Total San Antonio district	23,505
Total Southwest Texas district	54,826

Bee County Block

Southwest of Beeville, and northwest of Skidmore in Bee County, H. L. Chapman of Laredo, is reported to be taking a large block for the Selma Oil Co., subject to a 5,500-foot test to be started within 90 days after date of leases. The block centers around the Patrick O'Boyle, Samuel Allen and M. P. H. Love Surveys. In the same county, Dirks Brothers have made another interesting wildcat location, No. 1 Foley, approximately 2 miles northwest of the Old Holsmark gas field in the western part of the county.

In the eastern central part of Duval County, E. R. Thomas has made a tentative location in Section 26, on the Parr ranch for a 5,000-foot test to the Cockfield formation.

Shell Petroleum Corp. is reported to have leased the 15,000-acre L. D. Miller ranch, northern part of Brooks County. C. B. Bunte, Inc., has leased considerable acreage in the central part of the county and Sun Oil Co. has taken a large block, northeast of the Alta Mesa Pool.

In the Balcones fault zone area, T. T. Word has abandoned his No. 1-B K. S. Truelove in Uvalde County, 16 miles north of Sabinal at a total depth of 2,278 feet. In the Byersville Field, Williamson County, G. L. Rowsey's No. 4-A Heep was completed for 15 bbls. daily at a total depth of 910 feet. In the North Cedar Creek area, Bastrop County, Joe Mills' No. 1 Cardwell, was drilling for the Serpentine below 1,700 feet. Marts and Beavers spudded their No. 1 Voss in the Litton Survey No. 1.

L. E. Trout's No. 1 McKee, 4 miles southwest of the Darst Creek Field, in Guadalupe County, is drilling in the Taylor marl below 2,850 feet. Diamond Half Oil Co.'s No. 1 A. Schmide, east of Kingsbury in the Wakefield and Stewart Surveys, is rigging up.

Jim Wells County

In the northern part of Jim Wells County, Smith and Storey's No. 1 Dilworth, a wildcat in the Stanley Welch Survey No. 88, drilled the plug after plugging back from 6,115 feet to 3,725 feet and tested salt water. The hole has been plugged back again to test a broken sand and lime section at 3,300 feet, where an electrical coring test indicated a sand. If this sand does not prove productive, the test will be plugged back again to test another sand at 2,325-47 feet. It topped the Cockfield at 5,804 feet. In the Seeligson Field, northern part of the county, Magnolia Petroleum Co. has made location for No. 5 Seeligson. It is 1,320 feet due north and 660 feet west of No. 2 Seeligson on Farm 1, Block 4, of V. Canalas Survey.

Government Wells

In the Government Wells Field, the Salt Dome Corp. of Houston has acquired 100 acres out of the north central part of Survey No. 60 and will drill five wells to the Government Wells sand. Location has been made for the company's No. 1 Moody, 330 feet from north line and 1,870 feet from the west line of Survey No. 60. The operators are rigging up. The field received three producers during the week. Government Wells Oil Co.'s No. 8 State, in Survey No. 62, encountered sand from 2,256-75 feet and was completed for an initial production of 12 bbls. per hour from a total depth of 2,275 feet. Magnolia Petroleum Co.'s No. 10 J. O. Wilson, Survey 248, topped the sand from 2,425-33 feet and was completed for 25 bbls. per day on the pump. Total depth is 2,754 feet. In Block 27, Survey 250, Trapshooter Reilly's No. 6 Hahl was completed at a total depth of 2,360 feet for 60 bbls. daily.

Duval County

Conway and Buescher's No. 1 Hoffman, 3 miles east of the Hoffman gas area, Duval County, tested the lower Government Wells sand at 2,906-24 feet and recovered 1,900 feet of salt water, and sufficient oil to cover the pit. It is now coring for the Pettus sand. Two miles north, Magnolia Petroleum Co.'s No. 1 Ruiz is drilling below 3,000 feet. It tested salt water just below 2,800 feet and again below 3,000 feet.

West Tuleta

In the West Tuleta Field, Bee County, interest is centered on Dirks Brothers' No. 1 Roth, an outpost 2 miles west of production. At the end of the week it was drilling below 2,700 feet and is expected to reach the Pettus sand during the week. Luling Oil & Gas Co.'s No. 6 Ruhman, in the Caesar Field, northwestern part of the county, in Block 29, is drilling below 2,700 feet, and should core and test the sand during the week.

Live Oak County

Lion Oil & Refining Co.'s No. 2 McNeil, northeast of the discovery well in the McNeil Field, Live Oak County, is bottomed at a total depth of 6,038 feet in black shale, where the operators are testing. After the well had been swabbed, it flowed at the rate of an estimated 6,000,000 feet of gas per day and a small amount of oil and salt water. The test flows approximately one hour and then goes dead. While flowing through 2-inch tubing, the pressure on the casing was 750 pounds. One mile north, Henderson and Coquârt's No. 1 Little is drilling below 4,270 feet in broken sand and shale, with the sand lenses carrying a good oil odor. Helmerich and Payne's No. 1 Cartwright, a wildcat in Block 16, S.M.&R. Survey, is nearing the contract depth of 6,000 feet and will probably be abandoned at that depth. It is reported the rig will probably be moved to a wildcat location in Brooks County, where the operators will drill a deep test on the Scott ranch.

Frio County

Amerada Petroleum Corp.'s No. 2 Halff and Oppenheimer, a deep wildcat test which was drilled to a total depth of 10,050 feet in Frio County, is waiting on cement to set after plugging back the second time to 3,910 feet. On a test made last week from a plugged depth of 3,950 feet, the test showed an estimated 15,000,000 feet of gas and a considerable amount of fluid, of which a small amount was oil.

Webb County

The West Cole Field, Webb County, received three producers and locations for four new tests. American Liberty Oil Co.'s No. 7-A Bruni in Survey No. 6, Arispe grant, was completed at a total depth of 3,424 feet for an initial production of 40 bbls. per hour through a one-half inch choke. Same company's No. 9-A Bruni, Block 47, Survey 8, encountered sand from 3,419-31 feet, the total depth, and made 25 bbls. per hour. Sun Oil Co.'s No. 2 Bruni, Survey 5, Arispe grant, cemented 7-inch casing at 4,312 feet and was completed for 35 bbls. per hour; total depth 3,429 feet. American Liberty Oil Co. made locations for Nos. 10-A, 11-A and 12-A Bruni and will start drilling immediately. O. W. Killiam's No. 1 Bruni is a new location in Block 55. The operators have cemented surface casing at a total depth of 398 feet.

Sam Fordyce Field

In the Sam Fordyce Field, southwestern Hidalgo County, Weekly Oil Corp.'s No. 1 C. E. Smith, in Tract 278, Porcion 40, extended the producing limits approximately 300 feet south, when it flowed oil on a drill stem test made on sand at 2,745-50 feet. The test picked up the gas sand at 2,727 feet. The operators were cementing casing late in the week and it will be completed this week. It is south of Davis and Harrison's No. 1 Guerra which extended the field 3,200 feet west last week. Navarro Oil Co.'s No. 2 Seabury and others in the north 25 acres of the southeast 51 acres of Tract 256, Porcion 38, about 2,400 feet northwest of the discovery, was drilling at 400 feet after drilling plug in the surface pipe. If it makes a producer it will extend production 400 feet west.

Davis, Danvers and Harrison's No. 1 George, Porcion 41, Block 13, a wildcat in the southwestern part of the county, has been abandoned at a total depth of 4,136 feet. The operators shot the bottom with 40 sticks of dynamite, and the well flowed an estimated 4,000,000 feet of gas per day for about 15 minutes and then started flowing salt water. In the eastern part of the county, Union Sulphur Co.'s No. 2 American-Rio Grande Land & Irrigation Co., in Lot 2,082, Block 86, North Capisallo district, north of the city of Merceds, is drilling below 7,848 feet in sandy shale. This is the deepest test drilled in the county, and one of the deepest in the district.

Wildcat Operations in Southwest Texas

Week Ended December 15

BANDERA COUNTY

W. B. Kyle et al's No. 1 Duke, 200 ft. NW line, 150 ft. SW line of J. A. Bennett Sur. No. 7.
Location.

Plateau Oil Co.'s No. 1 Garrison Sur. No. 506, 1,500 ft from N and 2,700 ft. from E lines of Sur. (8 mi. SW of Medina)
S.D. 1,181 ft.

BASTROP COUNTY

Jim Harper's No. 1 Harris.
Location.

BEE COUNTY

Atkins & O'Neill's No. 1 M. Woods, 466 ft. from N and E lines of NW of Sec. 8.
Spudded.

Dirk Bros.' No. 1 Foley, N cor. of W. L. Foley tract, about 1 mile N of Simms' No. 1 Holsmark.
Moving in machine.

Dirks Bros.' No. 1 Roth, 990 ft. N line, 330 ft. W line of SW of Sec. 7.
Coring 2,720 ft.

Arthur W. Gray's No. 1 Rutledge, 2,322 ft. from N line, 250 ft. from E line of 200-ac. tract in B. Q. Hadley Sur.
Location.

Cecil Hagan's No. 1 John R. Scott, 1½ mi. NE of Morgan test.
Drlg. 1,500 ft.

R. M. Herod's No. 5 Kimball, 810 ft. from E line, 150 ft. from N line of 110-ac. tract in S. Winship Sur.
Derrick.

Humble O. & R. Co.'s No. 1 Daniel Fox, 7,500 ft. from N line, 3,370 ft. from E line of 1,884-ac. tract in M. Fox Sur.
Drlg. 4,190 ft.

Mid-Continent Cruce Oil Co.'s No. 2 Kimball (Grayburg area).
P.B. to upper sand; depth not reported.

R. J. Worthington et al's No. 1 Rutledge, 1,000 ft. from N line and 300 ft. from E line of A. Hadley Sur.
T.D. 3,424 ft.; drill pipe twisted off.

BEXAR COUNTY

N. G. Carter's No. 1 Ruiz, western part of county (work over).
T.D. 1,630 ft.; to move in spudder and C.O.

Eckert & Stiaren's No. 1 Annie I. Terrell, 79.5-ac., 150 ft. E line, 1,500 ft. N line of tract.
Drlg. 250 ft.

Florence East's No. 2 Madrigal, 2,970 ft. from S line, 990 ft. from W line of Share B, Salinas grant.
S.D. 75 ft.

C. A. Ingersoll's No. 1 Mann, S of Von Ormy in Rolen Sur.
Moving in.

Jones & Kieffer's No. 1 LaGrana, NW cor. of tract, 210 ft. each way, F. Rolen Sur.
Drlg. 165 ft.

Geo. O'Neill et al's No. 1 Salek Cherniarsky, E of Eckert Field.
Drlg. 970 ft.

R. Y. Walker's No. 1 L. A. Hamilton, 550 ft. SE and NW cor, 1,110 ft. NE of NW line of tract, Blk. 4,007.
Drlg. 984 ft.

BROOKS COUNTY

Helmerich & Payne's No. 1 Scott and Hooper, Palo Alto y Guerra grant.
Location.

CALDWELL COUNTY

O. Dawn's No. 1 F. Tiller, 250 ft. from N line, 1,000 ft. from E line of 37-ac. tract, in G. Hinds Sur.
Drlg. 2,280 ft.

Kurs Oil Co.'s No. 1 Kurs ranch fee, 4,000 ft. SW line and 4,300 ft. SE line of Barnard Klecamp Sur.
Drlg. 4,045 ft.; gas showing 3,890-3,905 ft.

F. Meyers' No. 1 Mooney, 250 ft. from road, 350 ft. from middle of SE cor. of 102-ac. tract, Seale Sur.
Rigging up.

Stanley Smith's No. 1 J. C. Copeland, about 4 miles SW of Lockhart and beyond the Mebana Estate.
Setting up machinery.

DUVAL COUNTY

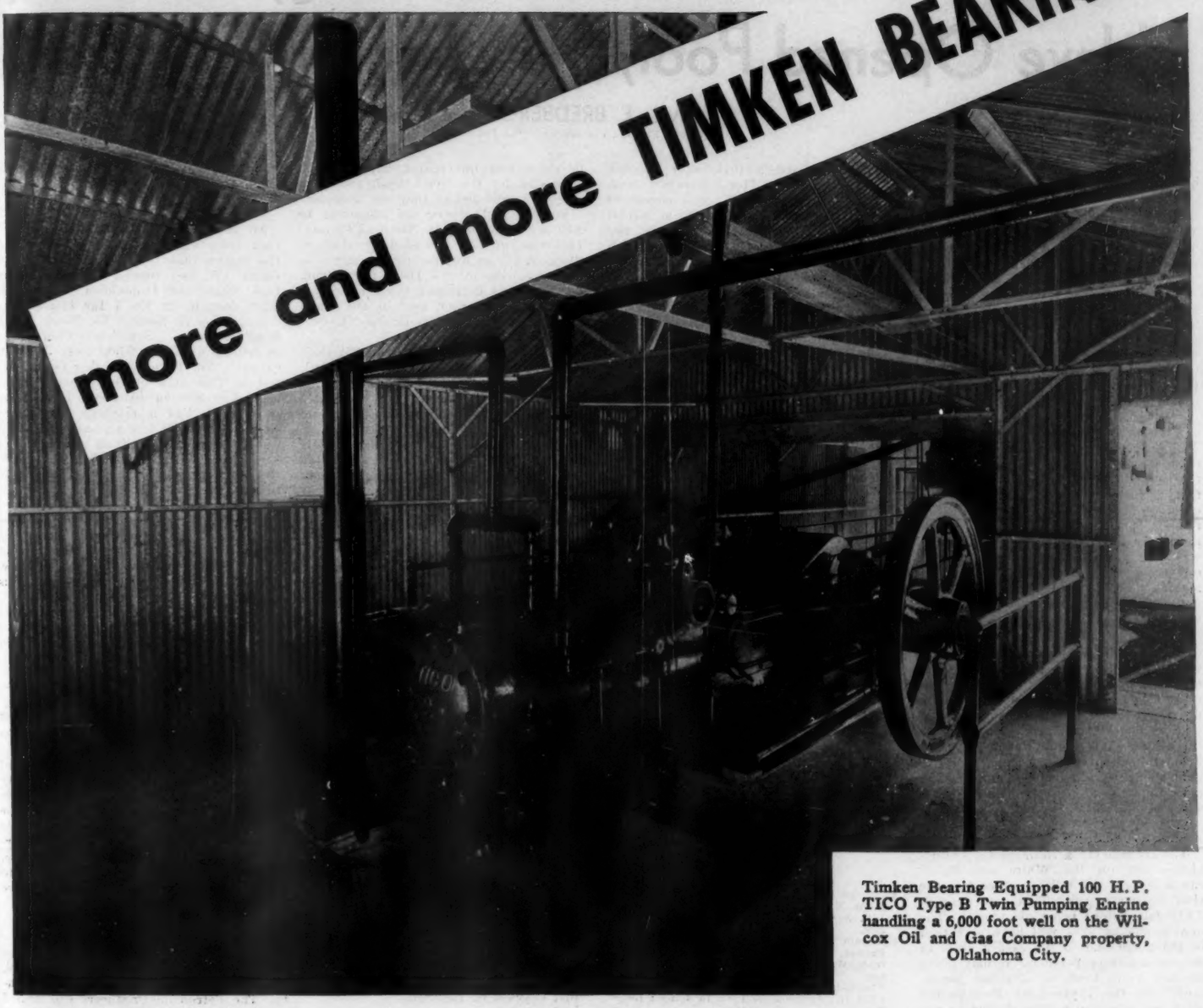
Buffalo-Texas Syndicate's No. 1 Escobas, 2,777 ft. from N line, 1,944 ft. from W line of 930-acre tract in San Francisco grant.
Rig up to deepen; T.D. 3,210 ft.

Conway & Buescher's No. 1 Hoffman, 330 ft. NE and SE lines of Sur. 119.
Coring 2,924 ft.

Grimes et al's No. 1 Fitzsimmons, 300 ft.

(Continued on Page 47)

All through the Oil Fields more and more TIMKEN BEARINGS



Timken Bearing Equipped 100 H. P. TICO Type B Twin Pumping Engine handling a 6,000 foot well on the Wilcox Oil and Gas Company property, Oklahoma City.

WHEREVER you may look throughout the oil fields you will find all types of Timkenized equipment at work keeping production up and production costs down. More and more Timken Bearings are being used because more and more oil field operators are demanding Timken economies and endurance in gas and steam engines, rig fronts, hoists, rotaries, swivels, pumps, and all other equipment.

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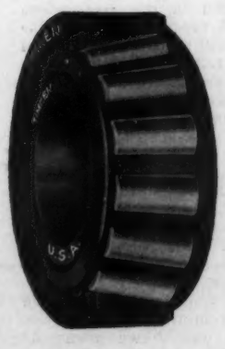


THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO

TIMKEN *Tapered Roller* **BEARINGS**

Activity in West Texas Is Increasing; Gulf May Have Opened Pool; New Panhandle Strike

By L. E. BREDBERG

Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Dec. 17.—West Texas again proved that it is receiving and is to receive more attention from independent operators and companies. There were 23 locations staked in the district during the week, the greatest number announced for at least three years. Several more wildcat and semi-wildcat locations were announced, one reported in Lynn County, a section that has not seen any activity for the past several years.

The staking of many locations was not the only feature in the district. The Gulf Production Co. drew attention to another producing area in Pecos County, located nearly midway between the Taylor-Link and Yates Pools. This test is the third drilled by the company in this area, one other having been a shallow test, and the second a test abandoned at 4,280 feet, 2 miles northwest of the new discovery. The discovery, located in Section 4, Block 207, T.C. Survey, topped the sandy lime section at 1,824 feet and was shut down at 1,825 feet to run an oil string and set storage tanks. It is making a small head of oil every hour, but nothing definite can be determined about the test at the present time.

The test is located on the southern line of one of the three blocks held by the Gulf Production Co. in this area, this certain block consisting of several sections blocked solidly to the north of the discovery. Another major company has just let considerable acreage go back to the owners, White and Baker, on which lands the discovery is located, and this land no doubt will bring a much higher price than the $1 per acre paid 10 years ago when the leases were taken.

May Open New Pool

The Humble Oil & Refining Co.'s Ordovician test on the White and Baker ranch is located 2 miles southeast of the Gulf discovery well. That test went to 9,811 feet before being abandoned. The new producing area will have to extend to the north and to the east if it is to assume major proportions. It may prove another Yates Pool, or of minor importance like the Taylor-Link Pool to the west, but attention will be riveted on the new well to note its potentiality, which will be a criterion as to the capacity of other tests drilled in the area, which will be the ninth producing area for the county. A line will probably be extended from Gulf Pipe Line Co.'s station in the Yates Pool to connect with the new well, 9 miles to the west, as soon as it proves worthy of a connection.

Location has been staked for another interesting test in Pecos County. The Shell Petroleum Corp. is to drill a wildcat in Section 35, Block 16, University Lands, approximately 3 miles east of the Taylor-Link Pool. The same company also made location for No. 1-F Bower-University, in Section 32, Block 16. Rig is up on this test.

Two wells are soon due for completion in another important area in West Texas, where attention was drawn about six weeks ago by the sandy lime discovery of the Sayre Oil Co. on the Howe ranch, about 3 miles east of the north end of the Hendricks Field in Winkler County. The Mid-Continent Oil Corp.'s No. 1 Howe, in Section 12, Block 26, north offset to the above named discovery, showed oil and gas from 2,708-45, 2,835-39 and 2,873-78 feet. It is now shut down at the latter depth flowing 25 bbls. per hour after running tubing and when testing.

The Magnolia Petroleum Co.'s No. 4 Walton, located a little over one-half mile north of the Howe discovery well, in Section 1, Block 26, was completed for a 225-bbl. per day producer at a total depth of 2,935 feet. It topped the pay at 2,815 feet. This is the most important test drilled in the area since the Howe test, due to its length of extension of the area.

Sinclair Prairie Oil Co.'s No. 1 Cummings, in Section 11, Block 26, a west offset to the above mentioned new well of the Mid-Continent Petroleum Corp. in Section 12, tested dry gas only at 2,890 feet after plug was drilled at 2,713 feet where 6⅝-inch pipe was set. It will be drilled deeper and will probably pick up the oil pay a little deeper.

Sandy Trend Looks Promising

The recently opened sandy trend between the Skelly Oil Co.'s discovery on the Halley ranch, in Section 25, Block B-11, and the Sayre Oil Co.'s No. 1 Howe, mentioned above, looks as if it would pay off for the several miles intervening between the two discovery wells. Maxwell and others' No. 1 Clapp, in Section 37, Block 26, about 4 miles south of the Howe discovery, is showing considerable gas from 2,585, 2,592 and 2,598 feet, and is drilling ahead with a loaded hole at 2,612 feet. Jefferies and others' No. 1 Brown and Altman, in Section 6, Block B-5, approximately 1½ miles southeast of the Maxwell test, struck considerable gas over a week ago and the derrick was burned. A new rig is being rigged up over the hole now to deepen. Total depth is 2,665 feet. Showings of gas made in these two intervening wildcats look promising for the trend. Both tests will be closely watched as they are deepened.

Stogner and others are preparing to drill a rank wildcat in Andrews County. This test will be located in Section 4, Block A-37, approximately 14 miles to the northwest of the Deep Rock Pool. The Fuhrman Petroleum Corp. is preparing to drill another test in the small Boner Pool. Location is in the NE Section 25, Block A-43.

Honolulu Oil Co. and Llano Oil Co.'s No. 1 J. E. Parker, in Section 7, Block A-44, wildcat southeast of the Deep Rock Pool, Andrews County, will evidently make a small producer since shooting with 260 quarts from 4,609-4,724 feet. It swabbed 30 bbls. in three hours, and is now preparing to make a test on the pump. It was previously plugged back from 4,780 to 4,371 feet to shut off sulphur water.

Humble Oil & Refining Co.'s No. 1 Walker, in Section 6, Block A-43, to the west of the above mentioned Parker well, Andrews County, is also sure of making a small producer. It was shot with 540 quarts from 4,270-4,480 feet and cleaned self, appearing as good for 60 bbls. per day, flowing. It is located between the Fuhrman and Deep Rock, and between the Fuhrman and Parker producers.

The Wahlenmaier Petroleum Corp. has staked location for an interesting wildcat about 6 miles southeast of the recently developed producer of the Gulf Production Co. on the Snodgrass lands, in Section 1, Block B-24, in northeast Crane County. The new location will be in Section 33, Block B-43, Township 4s, on the Kloh lands.

Ordovician Test Progressing

Of interest to those watching Ordovician tests drilling in the district, was the report that the Humble Oil & Refining Co. had topped the Ellenburger lime, important Ordovician member, at 6,248 feet, in its No. 1 Ike Honig, deep test drilling in Section 38, Block M, G. H.&S.A. Survey, Schleicher County. It is drilling ahead at 6,300 feet. John M. Cooper's No. 1 Page, another Ordovician test in this area of Schleicher County, located in Section 40, Block L, G.H.&S. A. Survey, had a rainbow showing of oil from 5,923-30 feet and another at 5,949-52 feet. It is drilling ahead around 5,962 feet. Skelly Oil Co.'s deep test in Reagan County, located in Section 33, Block 3, recovered tools lost in the hole and is now drilling ahead at 8,975 feet. This test has made unusually good time in drilling, and is especially interesting due to its location several miles south of the Big Lake Field, Reagan County, where the only Ordovician production is found in West Texas.

The majority of the deep producers in the Big Lake Field, Reagan County, have fallen off in production to nearly nothing in many cases, and both companies owning same have been working over the wells and experimenting with them in order to bring them back on production. The Big Lake Oil Co. has discovered that by shooting, then acidizing, remarkable results are obtained.

There were 12 completions reported for the district this week, Jones County drawing three dry holes, while Runnels and Ward each received a "duster." The Ward County abandonment was located in Section 169, Block 34, H.&T.C. Survey, about 5 miles northeast of Barstow, in extreme wildcat territory. It went to 5,155 feet before plugging orders were issued.

Wildcat Operations in West Texas

Week Ended December 17

ANDREWS COUNTY

Fuhrman Pet. Corp.'s No. 2-B Boner, 440 ft. from N and 1,320 ft. from E, Sec. 25, Blk. A-43. Rig.

Honolulu and Llano Oil Co.'s No. 1 J. E Parker, 1,320 ft. from S line and 1,470 ft. from W line of Sec. 7, Blk. A-44, P.S.L. Sur. Plugged back 4,731 ft.; shot 260 qts. 4,609-4,724 ft.; swabbed 30 bbls. in 3 hrs.; testing.

Humble Oil & Ref. Co.'s No. 1 B. S. Walker, 660 ft. from E line and 660 ft. from S line of Sec. 6, Blk. A-43, P.S.L. Sur. Plugged back to 4,490 ft.; shot 540 qts. 4,270-4,480 ft.; cleaned self.

Humble Oil & Ref. Co.'s No. 2 Means, 660 ft. from N and 1,980 ft. from W, Sec. 11, Blk. A-35. Drlg. 3,105 ft.

Humble Oil & Ref. Co.'s No. 3 Means, 1,980 ft. from S and 3,300 ft. from W, Sec. 4, Blk. C-45. Elev. 3,168 ft.; rig.

York & Harper's No. 1 Hereford Stock Farms, C Labour 12, League 315, Parmer Co. school Lands. Location.

BORDEN COUNTY

Moore Bros.' No. 1 Clayton & Johnson, 1,320 ft. N and E, Sec. 29, Blk. 32, Twp. 4n. T.&.P. Sur. Location.

BREWSTER COUNTY

Joiner et al's No. 1 McIntyre, 353 ft. from S, 2,390 ft. from E of Sec. 31, Blk. 353 W. M. Mitchell Sur. S.D. 2,100 ft.; rigging up rotary.

King & Franklin's No. 1 Gage Est., C Sec. 138, Blk. 22, G.H.&S.A. Sur. Straightreaming 341 ft.

COCHRAN COUNTY

Kelsey's No. 1 Slaughter, C Labour 36, League 150, R.C.S. Lands. Location.

West Texas Development Co.'s No. 1 Slaughter, near C of Labour 53, League 149, Randall Co. School Lands. Derrick.

COKE COUNTY

Wm. Hooper's No. 1 Gaston, 240 ft. from S line and 654 ft. from W line of Joseph Sur. No. 11. S.D. 2,560 ft.

CRANE COUNTY

Strauss' No. 1 Phelps et al, 2,113 ft. from N and 713 ft. from NW Sec. 13, Blk. 31, H.&T.C. Sur. T.D. 232 ft.; ran 10-in. csg.

Gulf Prod. Co.'s No. 1 Waddell, C NW NW Sec. 4, Blk. B-27, P.S.L. Sur. Material.

Wahlenmaier Pet. Corp.'s No. 1 Kloh, 330 ft. from S and 1,608 ft. from W, Sec. 33, Blk. 43, Twp. 4s, T.&P. Sur. Location.

CROCKETT COUNTY

Humble Oil & Ref. Co.'s No. 1 Couch, C NW Sec. 3, Blk. QR, G.C.&S.F. Sur. Material.

CULBERSON COUNTY

Anderson-Pritchard Oil Corp., Magnolia Pet Co. et al's No. 1 Borders, 1,355 ft. N and 2,305 ft. from W, Sec. 34, Blk. 69, P.S.L. Sur. Drlg. 480 ft.

Miller Bros.' No. 1 fee, 1,900 ft. from N and 660 ft. from E line of Sec. 21, Blk. 97, P.S.L. Sur. S.D. 2,145 ft.

Wood et al's No. 1 Hall, 250 ft. from S and 85 ft. from E, Sec. 11, Blk. 54½, 16 miles N of Van Horn, P.S.L. Sur. S.D. 246 ft.

DAWSON COUNTY

Ray Albaugh et al's No. 1 John Robinson, 1,320 ft. from N line, 1,320 ft. from W line of Sec. 46, Blk. M, E.L.R.R. Sur S.D. 3,300 ft.

ECTOR COUNTY

Amerada Pet. Co. et al's No. 1 Holt, 1,980 ft. from S and E, Sec. 20, Blk. A. Drlg. 1,478 ft.

Atlantic Oil Prod. Co.'s No. 1 T. P. Land Trust, 440 ft. from N and W of SE Sec. 11, Blk. 43, Twp. 1s, T.&P. Sur. Standard tools.

Black et al's No. 1 Connell, 330 ft. from S and 2,310 ft. from W, Sec. 1, Blk. B-16, P.S.L. Sur. T.D. 3,620 ft.; to shoot.

Harrison et al's No. 3 Addis, 1,650 ft. from N line and 2,300 ft. from W line of Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur. Set csg. 3,540 ft.

International Pet. Corp.'s No. 1 Cowden, 660 ft. from S and E, Sec. 25, Blk. 44, Twp. 2s, T.&P. Sur. Location.

(Continued on Page 46)

WICHITA FALLS DISTRICT

An unusually good well, and the best completed to date in the Andress Pool, was brought in this week in Cooke County. The Petroleum Producers Co. drilled its No. 3 Andress and others, in the J. Clark Survey, Abstract 194, to 1,249 feet, where it swabbed and flowed naturally, at the rate of 1,000 bbls. per day. Saturated lime was drilled from 1,200-47 feet. Other wells in this new pool, of which there are five, have been acidized, but none has shown the yield that this one did on natural flow. The Texas Co., Ruwalt of Gainesville, and the above named company, hold the acreage and wells in the pool.

A 4,000-foot test is scheduled to be drilled 6 miles southwest of Crowell and 9 miles southeast of the Texas Co.'s producers on the Les K. Johnson ranch of western Foard County. Cowden, Fagadau, Bolin and Lindsey, all of Wichita Falls, are interested in this wildcat test.

The test Frank Oyster is to drill to 1,950 feet in Jones County, is located 1½ miles west of the Jones discovery of Bryan and others. That test made 100 bbls. per day from the 1,900-foot pay.

There were 40 locations staked in the Wichita Falls district during the week, while 45 tests were completed, 19 of which proved dry.

PANHANDLE

A new field for Gray County was apparently in the making with the report that the Texas Co.'s No. 1-C Taylor,

(Continued on Page 44)

Location for Trinity Test in Anderson County; Sixty-Six Completions in East Texas Fields

By L. E. BREDBERG

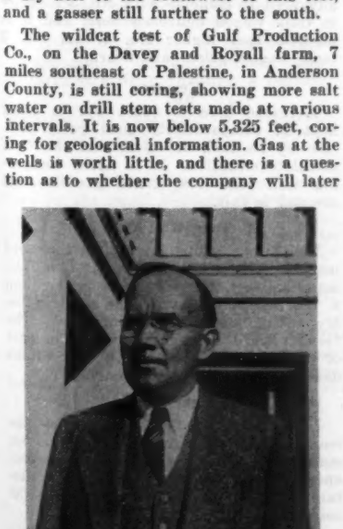
DALLAS, Tex., Dec. 17.—Location has been staked for the proposed Trinity sand test in the Cayuga Pool, northwest Anderson County, on the Wills "A" lease of the Tide Water Oil Co. and Texas Seaboard Oil Co., joint owners of the large block on which they drilled the discovery well early this year. The Wills lease is in the Samuel Edmondson Survey, northeast of the discovery.

The test will probably be drilled to around 7,000 feet, the regular pay horizon, the Woodbine sand, being found near 4,000 feet in the pool, in which there are 13 gassers and 37 oil producing wells. The gas wells are shut in.

This will be an interesting test as all such deep tests drilled in East and East Central Texas are considered of extreme importance. Two such tests have recently been abandoned on the Balcones Fault line, in this district, one in the Corsicana-Powell Pool, Navarro County, and the other in the western edge of the Mexia Pool, Limestone County. A previous deep test in the latter area also proved a "duster" although it had several good deep showings, as did Peyton Brothers' No. 1 Steubenrach, which is being plugged back in an effort to make a producer from shallow saturated streaks.

Trinity State Oil Co.'s No. 1 Trinity River Bed, about 2,000 feet southwest of the nearest producer, in the Cayuga Pool, northwest Anderson County, topped the sand at 4,006 feet and is shut down 10 feet in the sand, appearing as an oil producer. This test is appearing unlike other tests in the pool because of a shale break being logged between the oil and gas sands. Pipe is being set at 4,007 feet, and nothing definite will be known as to the potentiality of the well until plug is drilled and a test made, which will be in about six or seven days. There is a dry hole to the southwest of this test, and a gasser still further to the south.

The wildcat test of Gulf Production Co., on the Davey and Royall farm, 7 miles southeast of Palestine, in Anderson County, is still coring, showing more salt water on drill stem tests made at various intervals. It is now below 5,325 feet, coring for geological information. Gas at the wells is worth little, and there is a question as to whether the company will later plug it back to the heavy gas horizon at 5,045 feet to complete as a gasser.



M. D. Self, land man for the Magnolia Petroleum Co., Midland, Texas

Hunt County

Hagy, Harrison and Abercrombie wrote off another potential producing area in Hunt County this week, when they abandoned their No. 1 Morrison, in the A. Lawson Survey, 5 miles southwest of Greenville, at a total depth of 2,509 feet.

Only five locations were staked in the district this week for wildcat tests. One is to be put down by Leon Dunn and others on the Cain farm in Thomas Hill Survey in Anderson County, two are to be drilled in Cherokee County, one by Paul Potts on the Mable Long farm, in the Cook Survey, and one by Mabel Long on fee lands, in the same survey. Hagy and others are to drill on lands held by the Dallas Land Bank, in the L. Hart Survey, 7 miles southwest of Greenville, in Hunt County, in the area where Hagy and others have just compelted drilling one dry hole. E. L. Chapman of Fort Worth, has rigged up rotary for a test on the Hunt lands in the Israel Wood Survey, 3 miles northeast of Kosse, in Limestone County, for a Woodbine sand test.

Wells and Gordon are preparing to spud a test 11 miles northeast of Nacogdoches in Nacogdoches County, on the Zeno Rambin farm in the John Simpson Survey.

EAST TEXAS FIELD

There were 66 wells completed in the East Texas Field this week. Only one well was completed as a pumper, but three were completed "swabbing," six were completed as exceptionally small wells, and one was completed making only 30 bbls. in eight hours, of which 5 per cent was salt water.

The salt water line is showing deeper intrusion into the west side of the field, especially on the extreme southern end where salt water has long ago showed up across the field in east edge wells; near Overton and also in the Gladewater area where withdrawals have been heavy. Three out of the four wells completed in Upshur County, this week, were weak ones. Eastern Texas Petroleum Corp.'s No. 4-A Ray made only 20 bbls. in one-half hour at total depth of 3,611 feet, and United East & West Development Co. and Southland Drilling Co.'s No. 1 Shalton, made only 30 bbls. in four hours' pumping. Total depth is 3,710 feet. The well that made salt water was also in this county. It was drilled on the Ray farm by Lacy and others. Total depth was 3,624 feet.

Weighted average bottom hole pressure, taken by a group of company engineers, was found to be 1,221 pounds on December 1, or a 1-pound increase over the November gauge. Curtailing production was no doubt responsible for the gain in pressures.

COMPLETIONS IN EAST TEXAS

Gregg County

Atlantic Oil Producing Co.'s No. 29-A Burnside, top pay 3,529 feet, total depth 3,550 feet, initial production 140 bbls. Bond's No. 3 Cobb, total depth 3,576 feet, initial production 100 bbls. in one-half hour. Gaskill's No. 4 Key, top pay 3,662 feet, total depth 3,667 feet, initial production 30 bbls. in one-quarter hour. Guiberson's No. 3 Hopkins, top pay 3,487 feet, total depth 3,538 feet, initial production 100 bbls. per hour through 2½-inch tubing. Gulf Production Co.'s No. 13 Bozeman, total depth 3,618 feet, initial production 70 bbls.; No. 36 Sheppard, top pay 3,486 feet, total depth 3,512 feet, initial production 72 bbls.; No. 34 Sheppard, total depth 3,510 feet, initial production 68 bbls. Hawkins' No. 3 Shiloh School, total depth 3,672 feet, initial production 100 bbls. Humble Oil & Refining Co.'s No. 7-A Sheppard, total depth 3,629 feet, initial production 69 bbls. Dolly Bell Key's No. 2 fee, total depth 3,550 feet, initial production 30 bbls. in one-half hour. Magnolia Petroleum Co.'s No. 19 Everett, top pay 3,693 feet, total depth 3,696 feet, initial production 96 bbls.; No. 8 Key, total depth 3,568 feet, initial production 130 bbls.

Moran's No. 2 Dollahite, top pay 3,658 feet, total depth 3,686 feet, initial production 65 bbls. Phillips' No. 6-B League, top pay 3,594 feet, total depth 3,604 feet, initial production 60 bbls. Selby & Lewis Production Co.'s No. 20-A Snavely, top pay 3,563 feet, total depth 3,575 feet, initial production 30 bbls. in one-half hour. Shell Petroleum Corp.'s No. 11 Fishburn, total depth 3,552 feet, initial production 30 bbls. in one-half hour; No. 17 Hampton, top pay 3,613 feet, total depth 3,670 feet, initial production 45 bbls. in one-half sour. Yount Lee Oil Co.'s No. 8-A M. Smith, total depth 3,567 feet, initial production 55 bbls. in one hour through eleven-sixteenths inch choke; No. 7-B M. Smith, top pay 3,586 feet, total depth 3,603 feet, initial production 60 bbls. in one hour through eleven-sixteenths inch choke. Cal-Tex Corp.'s No. 10 Crim, total depth 3,577 feet, initial production 40 bbls. in one-quarter hour through 2½-inch choke. Gulf Production Co.'s No. 31 Brown, total depth 3,548 feet, initial production 60 bbls. Invincible Oil Co.'s No. 1 Francis, total depth 3,655 feet, initial production 125 bbls. Jones-O'Brien's No. 16 Hughey-Ross, total depth 3,556 feet, initial production 17 bbls. in one-quarter hour.

McAllister Oil Corp.'s No. 7-N Sabine River Bed, top pay 3,482 feet, total depth 3,522 feet, initial production 80 bbls. McCullough and others' No. 3 Knowles, top pay 3,571 feet, total depth 3,581 feet, initial production 62 bbls. Moss' No. 6 Marshall, top pay 3,526 feet, total depth 3,546 feet, initial production 100 bbls.; No. 10 Marshall, total depth 3,539 feet, initial production 20 bbls. per hour by heads. Robinson's No. 2 Elder, top pay 3,507 feet, total depth 3,550 feet, initial production 30 bbls. in one-quarter hour.

John H. Langston, chief scout of the Sun Oil Co., Dallas

East Central Texas Wildcats

Week Ending December 15

ANDERSON COUNTY

Leon Dunn et al's No. 1 Cain, 1,000 ft. from S and 950 ft. from E lines of Thomas Hill Sur.
S.D. 351 ft.

Gulf Prod. Co.'s No. 1 Dovey & Royall, 330 ft. from NE and NW of 172-ac. tract, M. Rogers Sur.
Coring ahead 5,360 ft.; to make test.

J. W. Luttes' No. 1 C. McKee, 2,640 ft. from N line of lease and survey and 330 ft. from W line of McKey 800-ac. tract.
Derrick.

Neil & McDowell et al's No. 1 Camp, 395 ft. from S and 150 ft. from E of SE 40 acres in J. Swearingen Sur.
S.D. 387 ft.

Trinity State Oil Co.'s No. 1 Trinity River, 1,870 ft. N and 1,200 ft. W of SW cor. of Sullenberger lands, Wm. Snyder Sur Top Austin 3,175 ft.; T.S. 4,011 ft.; T.D. 4,016 ft.; set csg.

BOWIE COUNTY

Tex-Ark. Oil Co.'s No. 1 Hamilton Estate, 660 ft. E and 350 ft. N lines, J. Milan Sur., 4 miles S of Red River.
Rigged up.

CHEROKEE COUNTY

J. B. Daniels' No. 1 Southern Pine Lbr. Co., 4,000 ft. N and 150 ft. W of SE cor. of Thompson Sur.
Fishing 2,442 ft.

H. L. Hunt Prod. Co.'s No. 1 Powell Lumber Co., 467 ft. from S and W lines of 52-ac. tract, 1 mile E and one-quarter mile N of discovery well, D. W. McNab Sur.
Location.

Jacksonville O. & G. Co.'s No. 1 H. D. Henderson, 660 ft. from N and W lines of 40-ac. tract out of Tankersley 104-ac. tract, 5 miles NE of Jacksonville on W side of railroad, J. Pineda Sur.
T.D. 752 ft.

E. M. Thomason et al's No. 1 Addis Estate, 250 ft. S of survey and 150 ft. E of railroad, J. T. Jones Sur., 6 miles NW Alto.
S.D. 2,150 ft.

Wilson Stubbs Oil Co.'s No. 1 Rowborts, 450 ft. from S line, 150 ft. from W line of 100-ac. tract, 2 miles SW of Jacksonville, J. D. Wolfin Sur.
S.D. 1,550 ft.; to test.

ELLIS COUNTY

Beckner-Finley et al's No. 1 Coker, 2,900 varas along S line of grant from river and 1,700 varas N at R/A, R. De La Pena Sur.
S.D. 527 ft.

FREESTONE COUNTY

Burris' No. 1 R. J. Johnson, NE cor. of a 95.5-ac. tract, W. M. C. Jones Sur.
S.D. 1,000 ft.

Halley-Young's No. 1 Cochran, 400 ft. N and W lines, D. Bullock Sur., 1 mile SE of Lima.
Location.

GREGG COUNTY

O. T. Clark's No. 1 Williams, 2,100 ft. from S and 2,400 ft. from W of D. Hill Sur., 3 miles NE of Longview.
Elev. 426 ft.; drlg. 2,660 ft.

HARRISON COUNTY

W. G. Boyd et al's No. 1 W. L. Rudd, no check; in sec. of 240-ac. tract and sur., W. D. Perry Sur.
Elev. 316 ft.; S.D. 2,418 ft.

HENDERSON COUNTY

Campbell and Chamberlain's No. 1 R. Ansley, 1,724 ft. W and 300 ft. S of SE cor. of M. Matthews Sur., N. H. T. Thompson Sur.
Skidding derrick.

Crosby and Pulp's No. 1 M. T. Dobbs, NW cor. of east Dobbs 100-ac. tract, 4 miles E of Malahoff and S of Railroad, George Aldrick Sur.
S.D. 4,150 ft.

HOPKINS COUNTY

D. A. Hale et al's No. 1 L. M. Hall, 200 ft. from N and E lines of 70-ac. tract, 1 mile SE of Miller Gros, A. Caro Sur.
S.D. 1,485 ft.

HUNT COUNTY

Cauble & Thompson's No. 1 Reed, 330 ft. N of northerly NE cor. of C. B. Payne Sur., but in F. Thweatt Sur., 3 miles SE of Greenville.
Derrick.

(Continued on Page 46)

Shell Petroleum Corp.'s No. 8 Neal, total depth 3,587 feet, initial production 40 bbls. in one-half hour; No. 8 Williams-Bonner, top pay 3,545 feet, total depth 3,556 feet, initial production 45 bbls. in one-half hour. Sultana Drilling Co.'s No. 2-D Sabine River Bed, top pay 3,527 feet, total depth 3,552 feet, initial production 135 bbls. Sun Oil Co.'s No. 13 Rollins, top pay 3,523 feet, total depth 3,554 feet, initial production 62 bbls. Texas Co.'s No. 22 Elder, total depth 3,657 feet, initial production 31 bbls. in one-half hour. Tide Water Oil Co.'s No. 23 Bivens, top pay 3,635 feet, total depth 3,642 feet, initial production 8 bbls. in 10 minutes through one 1-inch choke. Wainwright-West's No. 2 Martin, top pay 3,730 feet, total depth 3,730½ feet, initial production 30 bbls. one-half hour, swabbing.

Rusk County

Devonian and Bay's No. 9 Moore, top pay 3,759 feet, total depth 3,776 feet, initial production 36 bbls. in one-half hour. Humble Oil & Refining Co.'s No. 141 Crim, top pay 3,586 feet, total depth 3,592 feet, initial production 93 bbls.; No. 148 Crim, total depth 3,710 feet, initial production 104 bbls.; No. 154, top pay 3,587 feet, total depth 3,598 feet, initial production 108 bbls.; No. 155 Crim, total depth 3,637 feet, initial production 94 bbls. Magnolia Petroleum Co.'s No. 13 Wells, total depth 3,710 feet, initial production 18 bbls. in one-quarter hour. Atlantic Oil Producing Co.'s No. 8 Griffin, total depth 3,660 feet, initial production 60 bbls. Ball's No. 1 Brooks, total depth 3,700 feet, initial production 50 bbls. Samson & Carter's No. 2 Frederick, top pay 3,528 feet, total depth 3,580 feet, initial production 20 bbls. in two hours. Gulf Production Co.'s No. 4 Cole, total depth 3,808 feet, initial production 52 bbls. through three-quarters inch choke. Humble Oil & Refining Co.'s No. 38 Blackwell, top pay 3,623 feet, total depth 3,645 feet, initial production 67 bbls.; No. 14-B White, top pay 3,615 feet, total depth 3,721 feet, initial production 21 bbls. in 45 minutes; No. 22 Wooley, top pay 3,690 feet, total depth 3,709 feet, initial production 29 bbls. in 25 minutes through eleven-sixteenths inch choke.

Jenkins Oil Corp.'s No. 23 Jobe, total depth 3,620 feet, initial production 200 bbls. in six hours, swabbing. Marathon Oil Co.'s No. 13 Clay heirs, total depth 3,605 feet, initial production 30 bbls. per hour, swabbing; No. 14 DeGuerin, top pay 3,644 feet, total depth 3,680 feet, initial production 50 bbls.; No. 16 Ledbetter, top pay 3,650 feet, total depth 3,661 feet, initial production 15 bbls. in 27 minutes; No. 13 Mason, top pay 3,655 feet, total depth 3,673 feet, initial production 76 bbls. Ray Oil Co.'s No. 5 Thrash, top pay 3,765 feet, total depth 3,814 feet, initial production 40 bbls. in one-half hour. Yandle's No. 2 Town heirs, total depth 3,803 feet, initial production 30 bbls. Stanolind and Pure Oil Co.'s No. 46 Siler, total depth 3,606 feet, initial production 20 bbls. in 27 minutes; No. 49 Siler, total depth 3,625 feet, initial production 20 bbls. in 26 minutes; No. 50 Siler, total depth 3,599 feet, initial production 20 bbls. in 24 minutes; No. 51 Siler, total depth 3,610 feet, initial production 20 bbls. in 20 minutes; No. 52 Siler, top pay 3,606 feet, total depth 3,640 feet, initial production 20 bbls. in 30 minutes. Overton Refining Co.'s No. 1 Jones, total depth 3,682 feet, initial production 20 bbls. per hour, by heads.

Smith County

Tide Water Oil Co.'s No. 11 Jones, top pay 3,631 feet, total depth 3,652 feet, initial production 21 bbls. in 10 minutes through 1-inch choke.

Upshur County

Cal-Pet Corp.'s No. 8 Deering, top pay 3,638 feet, total depth 3,679 feet, initial production 60 bbls. Eastern Texas Petroleum Corp.'s No. 4-A Ray, total depth 3,611 feet, initial production 20 bbls. in one-half hour. Lacy's No. 2 Ray, total depth 3,624 feet, initial production 30 bbls. in eight hours, 5 per cent salt water. United East & West Oil Co. and Southland Drilling Co.'s No. 1 Shelton, total depth 3,710 feet, initial production 30 bbls. in four hours, pumping.

MISCELLANEOUS COMPLETIONS

Anderson County

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 11 Edens (fee), total depth 4,070 feet, initial production 90 bbls. in 21 hours through one-eighth inch choke; No. 14-A Wills, total depth 4,091 feet, initial production 100 bbls. in 16 hours through one-eighth inch choke.

Hunt County

Hager, Harrison and Abercrombie's No. 1 Morrison, dry and abandoned 2,509 feet.

Van Zandt County

Overton Refining Co.'s No. 4 Carter, total depth 2,960 feet, initial production 90 bbls. per hour through open tubing. Rogers and Schwartz's No. 1 McKinney, dry and abandoned 1,257 feet.

Property Deals

The Tide Water Oil Co. has made an inventory and otherwise checked the properties of the Simms Oil Co. in Louisiana, Texas and Arkansas. Atlantic Oil Producing Co. purchased the north 30-acre lease on the Jones lands in the G. W. Hooper Survey, Gregg County, from J. F. O'Donohoe and J. S. Bridwell for a consideration of around a quarter of a million dollars. It has been operated by Dillard Oil Co. Five wells are included in the deal.

West Texas Fields

(Continued from Page 42)

located in Section 52, Block B-2, H.&G. N. Survey, 3 miles southeast of the nearest production, and on the southeast edge of the granite ridge, had topped granite wash pay from 2,991-93 feet, logged an increase in oil from 2,999-3,004 feet and was flowing 10 bbls. per hour over a six-hour period when standing at 3,006 feet.

This is one of the most outstanding pieces of news reported in this district during the past year or so, and is of considerable importance due to its location south of the ridge.

There were eight locations staked in the district this week, with six tests completed, five of which were in Gray, and one in Wheeler County. All proved producers.

COMPLETIONS IN WEST TEXAS

Ector County

Stanolind Oil & Gas Co.'s No. 11 Cowden, top pay 4,115 feet, total depth 4,300 feet, shot 465 quarts 4,108-4,295 feet, initial production 1,273 bbls. per day.

Glasscock County

Noble & Co.'s No. 4 Pure-Lee, top pay 2,266 feet, total depth 2,475 feet, shot 108 quarts from 2,170-2,265 feet, acidized twice, initial production 45 bbls. per hour. Simms Oil Co.'s No. 2 McDowell, top pay 2,315 feet, total depth 2,316 feet, treated twice, initial production 35 bbls. per day pumping.

Howard County

Merrick and Lamb's No. 20 Clay, top pay 1,842 feet, total depth 1,871 feet, initial production 35 bbls. per day pumping.

Jones County

Hammer and Beams' No. 1 Shepard, dry and abandoned 2,002 feet. Ray & Staniforth's No. 1 Stewart, dry and abandoned 1,957 feet. Nugent Oil Co.'s No. 1 Wilson, dry and abandoned 1,977 feet.

Pecos County

Cardinal Oil Co.'s No. 25-E Tippett, top pay 468 feet, total depth 488 feet, initial production 195 bbls. per day pumping.

Runnels County

Petroleum Interests' No. 1 Bradley, temporarily abandoned 2,660 feet.

Taylor County

Eastland Oil Co. and others' No. 4 Hunter, top pay 2,370 feet, total depth 2,375 feet, initial production 50 bbls. per day swabbing.

Ward County

Plains Production Co. and others' No. 1 McGregor, dry and abandoned 5,155 feet.

Winkler County

Magnolia Petroleum Co.'s No. 4 Walton, top pay 2,815 feet, total depth 2,935 feet, initial production 225 bbls. per day.

COMPLETIONS IN PANHANDLE

Gray County

Champlin Refining Co.'s No. 8 McLaughlin, top pay 2,970 feet, total depth 3,040 feet, initial production 306 bbls. per day pumping. Danciger Oil & Refining Co.'s No. 3 Barrett, top pay 3,223 feet, total depth 3,288 feet, shot 150 quarts from 3,249-86 feet, initial production 520 bbls. per day pumping. Kewanee Oil & Gas Co.'s No. 2 Morgan, top pay 3,155 feet, total depth 3,253 feet, shot 320 quarts from 3,153-3,250 feet, initial production 320 bbls. per day pumping. Skelly Oil Co.'s No. 17 Schaffer, top pay 3,170 feet, total depth 3,290 feet, shot 300 quarts from 3,174-3,290 feet, initial production 341 bbls. per day. Texas Co.'s No. 4 Barrett, top pay 3,118 feet, total depth 3,200 feet, initial production 37 bbls. pumping.

Wheeler County

Skelly Oil Co.'s No. 10 Derrick, top pay 2,433 feet, total depth 2,530 feet, initial production 410 bbls. pumping.

WICHITA FALLS COMPLETIONS

Archer County

Abercrombie's No. 1-A fee, dry and abandoned 1,507 feet. Anderson's No. 3 Abercrombie, top pay 1,186 feet, total depth 1,198 feet, initial production 25 bbls. Burns' No. 1 Harris, top pay 1,382 feet, total depth 1,386 feet, initial production 5 bbls. Continental Oil Co.'s No. 8-C Fall County, top pay 1,094 feet, total depth 1,106 feet, initial production 50 bbls. Cullum's No. 16 Falls County-Ellis, top pay 1,135 feet, total depth 1,154 feet, initial production 59 bbls.

Fain & McGaha's No. 29 Arnold, top pay 1,202 feet, total depth 1,217 feet, initial production 350 bbls. Fain & McGaha and Humble Oil & Refining Co.'s No. 46 Logan, top pay 1,125 feet, total depth 1,140 feet, initial production 75 bbls. Grace and Woods' No. 2-B Bridwell, top pay 906 feet, total depth 912 feet, initial production 20 bbls. Hedrick's No. 1 Lemond, dry and abandoned 787 feet. Holbrook and Woods' No. 1 Jones, dry and abandoned 643 feet. Kimball and Wooten's No. 1 Webb, dry and abandoned 733 feet. Newburn's No. 1 Dormier, dry and abandoned 1,738 feet. Perkins and Cullum's No. 120 Falls County, top pay 1,108 feet, total depth 1,109 feet, initial production 40 bbls.; No. 122 Falls County, top pay 1,109 feet, total depth 1,120 feet, initial production 300 bbls. Rowdon, trustee's No. 1 Matlock, dry and abandoned 685 feet. White and Duncan's No. 1 Andrews, top pay 910 feet, total depth 911 feet, initial production 35 bbls. of oil and 60 bbls. of water. Wilkins' No. 1 Bridwell, dry and abandoned 922 feet.

Cooke County

Erlwine's No. 2 Poteet, top pay 1,429 feet, total depth 1,437 feet, initial production 15 bbls. Pace's No. 1 Dennis, dry and abandoned 1,657 feet. Petroleum Producers Co.'s No. 3 Andress Brothers, top pay 1,205 feet, total depth 1,249 feet, initial production 1,000 bbls. a day.

Jack County

Brownfield Development Co.'s No. 2 Shields, dry and abandoned 922 feet. Goble's No. 1 Smith, top pay 2,363 feet, total depth 2,366 feet, initial production 40 bbls. Scott and Whiteside's No. 1 Martin, dry and abandoned 1,002 feet.

Montague County

Continental Oil Co.'s No. 4 Lawler, top pay 1,704 feet, total depth 1,731 feet, initial production 300 bbls. Continental and Seitz's No. 5-A Hott, top pay 1,583 feet, total depth 1,638 feet, initial production 112 bbls. Texas Co.'s No. 2 O'Neal, top pay 1,708 feet, total depth 1,715 feet, initial production 325 bbls.

Wichita County

Bohner's No. 14 Allen & Kemp, top pay 1,631 feet, total depth 1,646 feet, initial production 17 bbls. oil and 3 bbls. water per day. Burns & Long's No. 15-D Allen & Kemp, top pay 463 feet, total depth 470 feet, initial production 15 bbls.; No. 16-D Allen & Kemp, top pay 213 feet, total depth 225 feet, initial production 2 bbls. Golding & Cochran's No. 4-D Waggoner Brothers, dry and abandoned 1,876 feet. Golding & Cochran and Waggoner's No. 3-H Waggoner Brothers. Petroleum Producers Co.'s No. 59 Allen & Kemp, top pay 454 feet, total depth 466 feet, initial production 5 bbls.; No. 60 Allen & Kemp, dry and abandoned 467 feet; No. 61 Allen & Kemp, dry and abandoned 478 feet. Keller's No. 1 McKinney Estate, dry and abandoned 809 feet.

Wilbarger County

Dunaway and others' No. 4 Waggoner, top pay 1,214 feet, total depth 1,220 feet, initial production 25 bbls. Phillips Petroleum Co.'s No. 6-L Waggoner, total depth 2,584 feet, initial production 24 bbls. oil and 110 bbls. water per day. Webb's No. 9-E Waggoner, top pay 1,883 feet, total depth 1,893 feet, initial production 100 bbls. Webb and Stilley's No. 1-C Waggoner, dry and abandoned 800 feet. Phillips Petroleum Co.'s No. 12-HH Waggoner, top pay 2,525 feet, total depth 2,534 feet, initial production 85 bbls.

Young County

Abernathy's No. 1 Knox, dry and abandoned 796 feet. Bornhard's No. 1 Belknap Coal Co., dry and abandoned 525 feet. Honea's No. 9 fee, dry and abandoned 946 feet. Moran's No. 4 Atchley, dry and abandoned 1,003 feet. Wainwright & Keith's No. 1 Mobley, dry and abandoned 695 feet. Wood and other's No. 1 Siebold, top pay 1,212 feet, total depth 1,214 feet, initial production 50 bbls. oil and 100 bbls. water.

Chicago Spot Gasoline Market Still Uncertain

(Continued from Page 38)

this material on contract has been quite good, including distillates, gas oils and even better fuels. No. 4 fuel has been advanced to coincide with No. 3 in price in tank wagon deliveries here, and it is possible that higher No. 1 and No. 2 tank wagon prices are near.

Kerosene

Kerosene here is quiet, but is being kept in comparatively good price position by its lack of offers and the firm distillate situation. It is again comparing well with low grade gasoline and demand is fair.

Industrial Oils

The heavy industrial fuel and gas oil market is little changed, but is firm. Demand is slow, but somewhat better than a few weeks ago, with the steel industry taking slightly more material. The trend toward railroad use of oil in part of this region also is up, in view of the demand for faster schedules.

Lubricants

Lubricants have shown a rather discouraged outlook for some time, but many believe the weakness has about spent itself. Trade buying is slow. Retail buying of motor oils is fair for the season.

Naphthas

Solvents and naphthas have been quiet, but firm in price. Demand has been holding up about unchanged.

Wax

Wax is slow. Prices have not changed, but the market does not display quite the snap and pep of a few months ago. Stocks are running somewhat larger.

Petroleum coke is seasonally firm to strong and in reasonably good demand. Movement of this material seems quite satisfactory.

Oil Entrainment in Absorbers Identified

(Continued from Page 22)

for the gas. Both froth curves are linear with respect to the linear velocity of the vapor.

The effect of liquid submergence on entrainment and pressure drop through the plate is shown in Figure 9 and Table 4.

Figure 10 gives a general idea of the comparative performance of the three

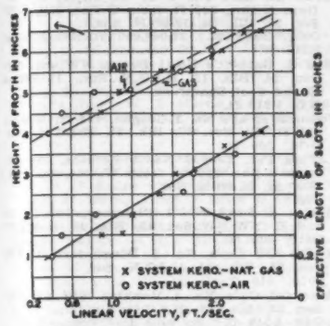


Figure 8. Variation of height of froth and effective length of slots at various linear velocities

Height of froth = top of slots to top of froth; effective length of slot = top of dead liquid to top of slot.

laboratory columns and a commercial absorber in the Oklahoma City Field.

After allowing for the greater density of the air, as compared with that of the gas, it is readily seen that the entrainment is higher in the 12½-inch column than in the small laboratory columns. This is probably due to the fact that the ratio of the slot area to the cross-sectional

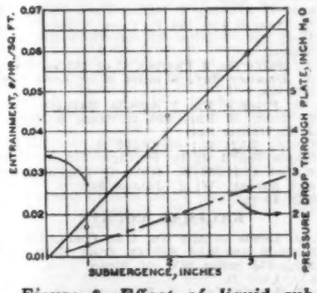


Figure 9. Effect of liquid submergence on entrainment and pressure drop through a bubble cap

Data from the glass tower for a kerosene-air system; plate spacing, 14 inches; linear velocity, 1.3 feet per second.

tower area is less in the 12½-inch tower than in the small columns. It was observed that the degree of atomization of liquid droplets was far greater in the 12½-inch tower, as a fog of kerosene floated out of the top of the tower during each run, although the distance from the upper tray to the top of the tower amounted to 7½ feet. No visible fog appeared in any of the runs on the glass column.

Further data are now being obtained in this laboratory on the 12½-inch semi-commercial column with gas, oil and water. A circulating pump will be installed so that the liquid can be pumped over the lower tray at various rates. In this way actual absorber conditions will be more nearly duplicated.

If the designers of absorption towers would provide curved tubing connections at several points in the tower immediately below different trays, much reliable commercial data could be obtained. The space in the top of an absorber might also be equipped with several such sampling devices at different distances above

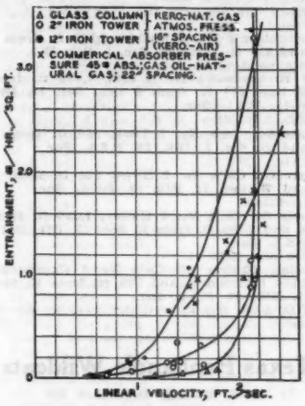

GLASS COLUMN, KERO-NAT. GAS
2" IRON TOWER, ATMOS. PRESS.
12" IRON TOWER, 16" SPACING (KERO.-AIR)
COMMERICAL ABSORBER PRESSURE 45# ABS.; GAS OIL-NATURAL GAS; 22" SPACING.
ENTRAINMENT, #/HR./SQ. FT.
LINEAR VELOCITY, FT./SEC.

Figure 10. Entrainment vs. linear velocity for different towers

the top tray for the purpose of studying the effect of spacing.

Conclusions

A study of the figures showing the relationship between entrainment and linear velocity shows that there are two causes for entrainment:

1. At lower velocities and greater plate spacings, entrainment is the result of the floating of minute liquid droplets from one tray to another.

2. At higher velocities and lesser plate spacings, entrainment is due mostly to the splashing of large drops of liquid as the result of the jetting action of the vapor.

3. The rate of increase of entrainment is slow up to a certain point, after which the increase is very rapid. This critical point is no doubt the velocity above which the jetting action begins to control.

4. The various factors which affect the values of C in Souders and Brown's equation and K in Carey's equation, such as tower design and the physical properties of the liquid and gas, will require further investigation before any general relationship can be developed.

Acknowledgment

The writers wish to express their appreciation for the assistance given by several of the students in petroleum engineering at the University of Oklahoma—C. W. Cannon, F. B. Emerson, C. A. Jackson, J. G. Stephen, and R. W. Whitson—in the construction and operation of the experimental columns.

The Phillips Petroleum Co. co-operated by furnishing commercial data from one of its natural gasoline plants in the Oklahoma City Field.

The Patent Chemicals Co. of Newark, N. J., donated a sample of oil-soluble Petrol Purple (1-hydroxy-4-p-toluidoanthraquinone) which was used for coloring the kerosene.

The Tulsa Boiler & Machinery Co. designed and built the 12½-inch I.D. semi-commercial column.

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TABLE 4—GLASS-COLUMN DATA (FIGURE 9)

(Kerosene-Air System; Plate Spacing, 14 Inches)

Run No.	Entrainment lb./sq. ft./hr.	Linear velocity ft./sec.	Submergence inches	Pressure drop inches of H_2O
16A	0.017	1.3	1.0	1.3
17A	0.030	1.3	1.5	...
18A	0.044	1.3	2.0	1.9
19A	0.046	1.3	2.5	...
20A	0.059	1.3	3.0	2.6
			Height of froth inches	Effective length of slots inches
21A	.....	0.40	4 00	0.20
22A	.....	0.52	4.50	0.30
23A	.....	0.84	5.00	0.40
24A	.....	1.20	5 10	0.50
25A	.....	1.70	5.50	0 51
26A	.....	1.80	....	0.60
27A	.....	2.00	6.00	0.60
28A	.....	0.02	6.50	....
29A	.....	2.22	....	0 70
30A	.....	0 90	4.50	0.30
31A	.....	1.10	5.00	0.31
32A	.....	1.20	5.05	0.40
33A	.....	1.42	5.30	0 50
34A	.....	1.48	5.50	0.50
35A	.....	1.62	5.55	0.60
36A	.....	1.80	5.55	0.62
37A	.....	2.00	5 85	....
38A	.....	2.10	6.00	0.74
39A	.....	2.42	6.50	0.81

Gulf Coast Fields

(Continued from Page 39)

1 Thompson Brothers Lumber Co. at a total depth of 3,304 feet. The operators made three drill stem tests, the last test at 3,060 feet, recovering 450 feet of drilling mud and fresh water. It is located in the Jose Ortego Survey. In the same county, nine miles north of Huntsville, Seaport Oil Co. starting a test 256 feet north of the south line and 337 feet west of the east line of the Wm. Hodges survey.

J. S. Wheelis and others' No. 1 Lewis Wittenburg, a wildcat in section 179, H. & T. C. Survey, Austin County, has been abandoned at a total depth of 5,636 feet after testing considerable salt water. It topped the Hockleyensis at 4,281 feet and the Cockfield at 5,103 feet. Quintana Oil Co.'s No. 1 L. S. Hillboldt, in the Miles N. Allen Survey is drilling below 3,000 feet in shale.

In the North Crosby Area, Harris County, Earl C. Hankamer is reported to have leased the south 500 acres of the F. A. McCormick 1,376 acre tract in the John Sellers Survey. Consideration was reported to have been $5 per acre bonus and $2 per acre rental. In the same area, L. M. Josey, purchased the south 1,000 acres of the W. E. Dyer 1,214-acre tract in the Wm. Whittock Survey, for a consideration of $5 per acre bonus and $1 per acre rental.

Resume Operations on Island

On Galveston Island, Galveston County, the wildcat test of J. E. Sedberry and others' No. 1 Tom Shaw, in the Tremble and Lindsey Survey, section 3, which has been standing shut down for several months at 53 feet has resumed operation and the operators have cemented 10¾-inch casing at 1,279 feet. Total depth is 1,330 feet.

In the Fordtran Area, Victoria County, Texas Co.'s No. 1 Irene Foster, which tested considerable salt water last week, was being prepared for abandonment when it blew out and ran wild for several hours before it was brought under control. It is making considerable dry gas and salt water at a total depth of 3,100 feet. It is three-quarters of a mile west of the company's No. 1 Potthast, a dry hole and the same distance east of the company's No. 1 Midgett, the discovery which was completed for a dry gas well. It is reported that the company will abandon the well and start another test in this area within the next few weeks.

The Manvel Field, Brazoria County, registered two dry holes and two new locations. In the southwest corner of lot 41, A. C. H. & B. Survey No. 91, Texas Co. abandoned its No. 1 Thomas James at a total depth of 7,638 feet. In the H. Stevens Survey the company's No. 1-A Massey was abandoned at a total depth of 7,491 feet. New locations were made for the company's No. 15 Houston Oil Field Assn. in lot 7, A. C. H. & B. Survey and No. 2 O. L. Rash in the Thomas Spraggins survey.

Gulf Coast Production

Following was the daily average production of Gulf Coast fields for the week ending December 12:

TEXAS GULF COAST

Field and county—	Bbls.
Arriola, Hardin	1,024
Barbers Hill, Chambers	19,853
Conroe, Montgomery	37,915
Esperson, Liberty	1,362
Goose Creek, Harris	3,195
Hankamer, Liberty	1,122
High Island, Galveston	6,501
Hull, Liberty	7,388
Humble, Harris	3,653
Livingston, Polk	2,189
Manvel, Brazoria	3,554
Markham, Matagorda	1,396
Orchard, Orange	1,355
Pierce Junction, Harris	3,503
Port Neches, Orange	1,267
Raccoon Bend, Austin-Waller	4,396
Sour Lake, Hardin	1,805
Spindletop, Jefferson	2,801
Sugarland, Fort Bend	6,125
Thompson, Fort Bend	11,794
Tomball, Harris-Montgomery	3,937
West Columbia, Brazoria	2,672
Greta, Refugio	12,931
Pettus, Bee-Goliad, Karnes	3,671
Refugio, Refugio	4,248
Saxet, Nueces	1,373
Other pools	12,648
Total, Texas Gulf Coast	164,763

LOUISIANA GULF COAST

Field and parish—	Bbls.
Black Bayou, Cameron	1,091
Bosco, Acadia-St. Landry	8,724
Caillou Island, Terrebonne	5,293
Cameron Meadows, Cameron	1,517
Evangeline (Jennings), Acadia	1,203
Hackberry (Eas.), Cameron	4,529
Iowa, Jefferson Davis-Calcasieu	18,415
Lake Barre, Terrebonne	5,131
Lake Washington, Plaquemines	1,045
Leesville, La Fourche	19,801
Lockport, Calcasieu	2,025
Port Barre, St. Landry	3,513
Roanoke, Jefferson Davis	1,694
Sulphur, Calcasieu	3,422
Sweet Lake, Cameron	1,011
Vinton, Calcasieu	3,871
Other pools	3,801
Total Louisiana Gulf Coast	85,087
Total Texas Gulf Coast	164,786
Total Gulf Coast	249,873

South Louisiana

Union Sulphur Co.'s No. 1 State, completed last week the second producer for the Gillis Area, Calcasieu Parish, La., started making salt water on the third day after completion, and at present is making 5 per cent. The choke has been reduced from a ⅜ to a ¼-inch and it is making 500 barrels of oil daily. It is producing from 10 feet of sand bottomed at 6,759 feet. Location has been made for the company's No. 1 Powell Lumber Co. It is 600 feet north of No. 1 State in section 12-9s-8w. One mile due south of the discovery, Fohs Oil Co.'s No. 1 Castle is drilling in lime and pyrites below 6,536 feet. It should reach the pay horizon found in the discovery well by the middle of the week. Location is in section 13-9s-8w.

The Bosco Field, Acadia and St. Landry Parishes, was extended 1,000 feet west, when Superior Oil Prod. Co.'s No. 2 Arceneaux, 1,000 feet west of the company's No. 1 Euclid LeBlanc, in section 33-8s-3e, was completed for an initial production of 875 barrels in 24 hours through a twelve-sixty-fourths inch choke. The well is bottomed at 8,687 feet, with 7-inch casing cemented at 8,652 feet. Tubing pressure was 1,250 pounds and casing pressure 1,450 pounds. The company has two other wells due to be on the completion list during the week. No. 3 Iseringhauser, in section 27, is bottomed at 7,851 feet, with 9⅝-inch casing cemented at 7,843 feet. No. 1 L. Lavergne is waiting on cement to set at a total depth of 8,714 feet. Seven-inch casing was cemented at 8,696 feet. No. 1 Malancon is waiting on cement to set at a total depth of 8,620 feet. Seven-inch casing was cemented at 8,573 feet. If this test makes a producer it will extend the field a short distance south. It is in section 34-8s-3e. In the southeast part of the field, No. 1 Martinez, the deepest test drilled in the field is coring in hard sand below 5,548 feet.

West Texas Wildcats

(Continued from Page 42)

Landreth Prod. Co.'s No. 1 Johnson, 440 ft. from N and W, Sec. 47, Blk. 43, Twp. 1s, T.&P. Sur.
T.D. 4,236 ft.; plugged back to 4,186 ft.; S.D.

Shell Pet. Corp.'s No. 1 Connell, 1,980 ft. from N and 660 ft. from E, Sec. 12, Blk. B-16, P.S.L. Sur.
Drlg. 2,560 ft.

Stanolind Oil & Gas Co.'s No. 8 J. M. Cowden, 440 ft. from S line and 440 ft. from W line, Sec. 34, Blk. 43, Twp. 1n. S.D. 380 ft.

Sunray & Llano's No. 2 Jones, 2,310 ft. from N and E, Sec. 6, Blk. 44, Twp. 3s.
Drlg. 3,645 ft.; 750 bbls. in 6 hrs. at 3,632-36 ft.

Southern Oil Co.'s No. 2 King, 230 ft. from S and W, Sec. 193, Blk. 1.
Rig.

EDWARDS COUNTY

Harry Adams' No. 1 Holman, 1,650 ft. from N and 330 ft. from E, Sec. 22, [illegible] &R.G.N.G. Sur.
Show oil 520-25 ft.; T.D. 602 ft.; trying to shut off water.

EL PASO COUNTY

Mesa Oil Co.'s No. 1 Coronado Valley, S.D. 1,415 ft.

FISHER COUNTY

Merry Bros. and Perrini's No. 1 Howard, 1,320 ft. from N and 660 ft. from E, Sec. 180, Blk. 2, H.&T.C. Sur.
Drlg. 2,120 ft.

Roeser & Pendleton's No. 2 Hill, 2,310 ft. from N and 330 ft. from E, Sec. 203, B.B.B.&C. Sur.
C.O. 890 ft.

GLASSCOCK COUNTY

Currie et al's No. 1 Currie, 330 ft. from S and W, Sec. 10, Blk. 35, Twp. 4s, T.&P. Sur.
Elev. 2,715 ft.; top salt 1,325 ft.; drlg. 2,145 ft.

John I. Moore et al's No. 1 J. S. McDowell, 1,980 ft. from N line and 660 ft. from E line of Sec. 23, Blk. 34, Twp. 2s, T.&P. Sur.
Drlg. 7,285 ft.

World Oil Co.'s No. 3-C McDowell, 2,310 ft. from N and W, Sec. 21, Blk. 34, Twp. 2s, T.&P. Sur.
Set csg. 2,190 ft.

HOWARD COUNTY

F. H. E. Oil Co.'s No. 2 Dodge, 330 ft. from N and 990 ft. from E, Sec. 15, Blk. 30, Twp. 1s, T.&P. Sur.
T.P. 2,590 ft.; T.D. 2,830 ft.; to shoot.

Iron Mountain Oil Co.'s No. 1 Read, 330 ft. from E line, 330 ft. from S line, Sec. 44, Blk. 30, Twp. 1n, T.&P. Sur.
T.D. 3,827 ft.; est. 150 bbls. day.

Mixon et al's No. 1 Capps & Lucas, 2,310 ft. from S and 330 ft. from W, Sec. 17, Blk. 29, Twp. 1n, T.&P. Sur.
Drlg. 2,605 ft.

Slagel's No. 1 Foster, 990 ft. from S and 330 ft. from W, Sec. 43, Blk. 29.
Shut down.

IRION COUNTY

Johnson's No. 2 Tankersley, 500 ft. from N and 600 ft. from W, Sub. 722, H. Voelker Sur.
Drlg. 902 ft.

JEFF DAVIS COUNTY

C. M. Joiner's No. 1 Jones & Coffield, 770 ft. from N and 1,323 ft. from E, Sec. 4, Blk. 3, H.&T.C. Sur.
Standard tools.

JONES COUNTY

Campbell et al's No. 1 Enevill, 1,400 ft. from N and 370 ft. from W, Sec. 2, M.E.&P. Sur., ½ mile S of Anson.
Fishing 1,520 ft.

Byram et al's No. 1 McWright, 300 ft. from N and 660 ft. from W of SW Sec. 5, Blk. 15, Twp. 1s, T.&P. Sur.
Drlg. 200 ft.

Condor Pet. Co.'s No. 2 Holt, 660 ft. from S and 330 ft. from E, Sec. 4, Blk. 20.
Drlg. 1,947 ft.

Dr. C. E. Johnson's No. 1 Young, 1,300 ft. from N and 750 ft. from W of SE 200 acres of B. Travenio Sur.
Drlg. 90 ft.

Richards et al's No. 1 Ransom, 300 ft. from N and E, Sec. 244, B. M. Clopton Sur.
S.D. 750 ft.

Southern Oil Co.'s No. 2 Cade, 330 ft. S and 990 ft. E in Sec. 17, Blk. 19, T.P. Sur.
S.D. 2,400 ft.

LOVING COUNTY

California Co.'s No. 5-A Allen, 1,320 ft. from NE and 2,310 ft. from SE Sec. 90, Blk. 1.
Drlg. 2,295 ft.

D. C. Evans' No. 1 W. D. Johnson, 2,310 ft. from N and 1,650 ft. from W, Sec. 14, Blk. 57, Twp. 1, T.&P. Sur.
S.D. 2,030 ft.; sulphur water.

LYNN COUNTY

Hart Oil Co.'s No. 1 Edwards, 220 ft. from N and 200 ft. from W of SE Sec. 29, L.&S.V. Sur.
Rigged up.

MARTIN COUNTY

Wright & Scott's No. 1 Flannigan, 330 ft. N and E, Sec. 22, Blk. 37, Twp. 1s, T.&P. Sur.
Standard tools.

MITCHELL COUNTY

Harry Adams' No. 1 Mackey, 1,980 ft. from N and 660 ft. from W, Sec. 13, Blk. 29, Twp. 1n, T.&P. Sur.
Location.

PECOS COUNTY

Gulf Prod. Co.'s No. 3 White & Baker, SE cor. of N half Sec. 4, Block 207, T.C. Ry. Sur.
Drlg. 1,720 ft.

C. S. Messenger's No. 2 Rand Jones, 1,985 ft. from S line and 1,013 ft. from W line of Sec. 5, Blk. 9, H.&G.N. Sur.
Fishing 2,447 ft.

Shell Pet. Corp.'s No. 1-F Bower-University, 980 ft. from N and 660 ft. from W, Sec. 32, Blk. 16.
Rig.

Shell Pet. Corp.'s No. 1-A Carlson-University, 660 ft. from N and E, Sec. 36, Blk. 16.
Drlg. 200 ft.

Trans-Tex. Oil Co.'s No. 1 Caldwell, 330 ft. from E line and 330 ft. from S line of Sec. 27, Blk. 40, Twp. 9, T.&P. Sur.
S.D. 1,301 ft.

REAGAN COUNTY

Skelly Oil Co. et al's No. 1-D E. S. Grayson, 1,980 ft. from N line and 660 ft. from W line of Sec. 33, Blk. 4, University Land Sur.
Drlg. 8,975 ft.

REEVES COUNTY

J. E. Cunningham's No. 1 Altman, 2,310 ft. from N line and 1,980 ft. from E line of Sec. 1, C. C. Wyatt Sur.
S.D. 2,456 ft.

Herbert Oil Co.'s No. 1 Williams & Walker, 5,280 ft. from S and 1,320 ft. from E, Sec. 17, Blk. 6, H.&G.N. Sur.
Material.

RUNNELS COUNTY

Dennis et al's No. 1 Wash, 550 ft. from N and 660 ft. from E of W half, Sec. 123, E.T.R.R. Sur.
Spudded and S.D.

Melrose Oil Co.'s No. 1 L. P. Woods, 150 ft. from NE lines and 3,475 ft. from W line of survey, Willett Holmes Sur. No. 100.
Drlg. 1,965 ft.

R. Wells' No. 1 James, 396 from N and 330 ft. from E of James tract in Sec. 16, D. Diaz Sur.
Drlg. 1,110 ft.

SCHLEICHER COUNTY

John M. Cooper et al's No. 1 Bert Page, 1,290 ft. from N line, 1,470 ft. from W line of Sec. 40, Blk. L, G.H.&S.A. Sur.
Show oil 5,923-30 ft. and 5,949-52 ft.; drlg. 5,962 ft.

Humble Oil & Ref. Co.'s No. 1 Ike Honts, 2,640 ft. from N line and 2,650 ft. from E line of Sec. 38, Blk. M, G.H.&S.A. Sur.
Top Ellenburger 6,248 ft.; drlg. 6,300 ft.

W. C. Proctor et al's No. 1 Judkins & Spencer, 1,320 ft. from S and W of W. W. Russell grant.
Standard tools.

SCURRY COUNTY

Coffield & Guthrie's No. 1 Holliday, 2,310 ft. from N and 330 ft. from W, Sec. 130, Blk. 97, H.&T.C. Sur.
Drlg. 1,732 ft.

McLaughlin's No. 1 Allen, 1,331 ft. from N and 1,338 ft. from E, Sec. 298, Blk. 97.
Machine.

STERLING COUNTY

Merry Bros. & Perrini's No. 1 Standsberry, 1,980 ft. from N and E Sec. 20, Blk. 30, W.&N.W. Sur.
Location.

STONEWALL COUNTY

Merry Bros. and Perrini et al's No. 1 Williams, C SW of SW, Sec. 6, Blk. C, A.B.&M. Sur.
Fishing 2,667 ft.

SUTTON COUNTY

Texas et al's No. 1 Mower, 1,980 ft. from S and W of Sec. 39, Blk. 5, T.W.&N.G. Sur.
Elev. 2,349 ft.; drlg. 1,105 ft.

TAYLOR COUNTY

Dunnigan Bros. et al's No. 3 Hunter, 225 ft. from S and 750 ft. from W, Sub 14, Willis Sur.
Drlg. 850 ft.

TERRELL COUNTY

W. A. Sudderth's No. 1 Phelps, 2,157 ft. from N line and 2,482 ft. from the W line of Sec. 5, Blk. 4-A, G. W. Turley Sur.
T.D. 5,635 ft.; C.O.

UPTON COUNTY

Gulf Prod. Co.'s No. 103 McElroy, 1,980 ft. from S and 660 ft. from W, Sec. 197, Blk. F, C.C.S.D.&R.G.N.G. Sur.
S.D. 10,978 ft.; C.P. 1,250 lbs.; T.P. 105 lbs.

King Mountain Pet. Co.'s No. 1 Sherk, 330 ft. from S and W, Sec. 29, Blk. 1, M.K.&T. Sur.
Drlg. 415 ft.

Williams & Williams Drlg. Co.'s No. 1 Robbins, 1,600 ft. from S and 1,900 ft. from E, Sec. 4, G.C.&S.F. Sur.
S.D. 2,040 ft.

WARD COUNTY

Atlantic Oil Prod. Co.'s No. 1 Miller, 462 ft. from NW and 504 ft. from NE Sec. 3, J. C. Russell Sur.
T.D. 2,420 ft.

Alexander's No. 1 Richter, 1,650 ft. from NW, 1,170 ft. from NE line of Sec. 21, Blk. 34, H.&T.C. Sur.
S.D. 1,700 ft.

Bradford et al's No. 1 E. R. Allen, 660 ft. from NW line and 551 ft. from NE line Sec. 11, H.&T.C. Sur.
Fishing 500 ft.

Cook Drlg. Co.'s No. 1 Wood, 330 ft. from NW and SW, Sec. 5, W. F. Stewart Sur.
Pumped 25 bbls. fluid, 50 per cent water.

Gulf Prod. Co.'s No. 52 O'Brien.
Drlg. by tools at 2,685 ft.; T.D. 2,702 ft.

Gulf Prod. Co.'s No. 53 O'Brien.
Drlg. 2,770 ft.; making some oil.

Postellio & Caprito's No. 1 Purcell, 330 ft. from NE and 990 ft. from NW, Sec. 19, Blk. 34, H.&T.C. Sur.
S.D. 2,240 ft.; standardizing.

Rector Oil Co.'s No. 1 Monroe, 660 ft. from SE and NE, Sec. 2, Blk. 1, W.&N.W. Sur.
Spudded and S.D.

Sageland Oil Corp.'s No. 2 Pure-Bennett, 1,650 ft. from NW and 2,310 ft. from SW Sec. 16, Blk. 34, H.&T.C. Sur.
Spudded and S.D.

Tex-Mex Pet. Corp.'s No. 1 Pure-Bray, 1,980 ft. from NE and 660 ft. from NW, Sec. 6, Blk. 6, H.&T.C. Sur.
Drlg. 2,528 ft.

West Texas O. & R. Co.'s No. 1-C University, 330 ft. from N and E, Sec. 6, Blk. 16.
Material.

WINKLER COUNTY

Gulf Prod. Co.'s No. 1 Wight, 330 ft. from S and E, Sec. 26, Blk. 46, P.S.L. Sur.
Standard tools.

Harry Adams' No. 2 Scarborough, 990 ft. from N line and 990 ft. from W line, Sec. 3, Blk. 77, P.S.L. Sur.
Location.

Jeffries et al's No. 1 Brown & Altman, 2,310 ft. from S and W, Sec. 6, Blk. B-4, T.D. 2,665 ft.; rigged up new machine.

Dr. Jeffries et al's No. 1 Underwood, 330 ft. from S and 2,310 ft. from E, Sec. 34, Blk. B-3.
S.D. 400 ft.

J. C. Maxwell's No. 1 Clapp, 2,310 ft. from N and 330 ft. from E, Sec. 27, Blk. 26, P.S.L. Sur.
Drlg. 2,612 ft. with hole loaded.

Maxwell's No. 1 Daugherty.
Set csg. 250 ft.; drlg. 787 ft.

G. S. Mathews et al's No. 1 Evans, 1,320 ft. from N line and 1,320 ft. from W line Sec. 46, Blk. 73, P.S.L. Sur.
S.D. 110 ft.

Mid-Continent Pet. Corp.'s No. 1 Howe, 2,310 ft. from N and 330 ft. from W, Sec. 12, Blk. 26, P.S.L. Sur.
Show oil 2,373-78 ft.; T.D. 2,894 ft.; to test.

Richardson's No. 1 Walton, 1,010 ft. from S and 330 ft. from W, Sec. 1, Blk. B-3.
Standard tools.

Old Richardson's No. 1 Hill, 1,980 ft. from E line, 660 ft. from S line, Sec. 18, Blk. B-11, P.S.L. Sur.
S.D. 3,685 ft.

Sayre Oil Co.'s No. 1 Leck, 330 ft. from S and E, Sec. 2, Blk. 26, P.S.L. Sur.
Drlg. 1,290 ft.

Sayre Oil Co.'s No. 2 Howe, 330 ft. from N and W, Sec. 12, Blk. 26, P.C.L. Sur.
Location.

Skelly Oil Co.'s No. 2 Halley, 1,320 ft. from N and 2,200 ft. from E, Sec. 35, Blk. B-11, P.S.L. Sur.
Set csg. 1,333 ft.

Sinclair Prairie Oil Co.'s No. 1 Cummings, 2,310 ft. from N and 330 ft. from E, Sec. 11, Blk. 26, P.S.L. Sur.
T.D. 2,890 ft.; showed dry gas; no oil on test.

Texas Panhandle Wildcats

Week Ending December 17

CARSON COUNTY

McGill's No. 1 Cooper, 330 ft. from S and W of N½ NE Sec. 4, Blk. 9, I.&G.N. Sur.
Top pay 3,030 ft.; T.D. 3,058 ft.; shot. T.P. 2,965 ft.; T.D. 3,058 ft.; putting on pump.

McClintock et al's No. 1 Jordan, 660 ft. N. 413 ft. W, Sec. 105, Blk. 4, I.&G.N.
Rig.

Phillips Pet. Co.s No. 1 Cooper, 330 ft. S and E, Sec. 4, Blk. 9, I.&G.N. Sur.
Material.

CHILDRESS COUNTY

Humble Oil & Ref. Co.'s No. 1 B. P. Smith, 1,327 ft. from S line and 1,327 ft. from E line of Sec. 27, H.&G.N. Sur., Blk. 9.
Fishing 5,225 ft.

COLLINGSWORTH COUNTY

Andrews & Kerr's No. 1 Gideon-Bell, C NW NE Sec. 6, Blk. 13, H.&G.N. Sur.
S.D. 2,100 ft.; S.G. 1.985-98 ft.

DALLAM COUNTY

Eben Warner's No. 1 Jarbie, 1,620 ft. from S line, 415 ft. from W line, Sec. 2, B.&B. Sur.
S.D. 3,200 ft.; may abandon.

GRAY COUNTY

Irish-American Oil Co.'s No. 1-B Morse, 990 ft. S and 330 ft. E, W½ NE Sec. 54, Blk. 25, H.&G.N. Sur.
Standard tools.

Plains Holding Co.'s No. 1 Morse-Gulf, 330 ft. S and W, Sec. 57, Blk. 25, H.&G.N. Sur.
Cellar.

Stanolind O. & G. Co.'s No. 1 Cutter, 330 ft. N and E, W½ NE Sec. 173, Blk. 3, I.&G.N. Sur.
Location.

Texas Co.'s No. 1-C Taylor, 1,325 ft. from N and 1,320 ft. from W, Sec. 52, Blk. B-2, H.&G.N. Sur.
T.D. 3,004 ft.; building tanks; oil and gas at 2,999 ft.

Texas Co.'s No. 1 Taylor, 990 ft. S and W of Sec. 81, Blk. B-2, H.&G.N. Sur.
Location.

HUTCHINSON COUNTY

Huey et al's No. 1 Christian, 220 ft. from S and 330 ft. from W, Sec. 32, Blk. Y, A.&B. Sur.
S.D. 3,060 ft.

Stekoil's No. 2 G. W. Whittenburg, 330 ft. S and W of H. Prewitt Sur.
Drlg. 210 ft.

Stanolind O. & G. Co.'s No. 1 Kinzer, 330 ft. S and E, Sec. 148, Blk. 3, T.&N.O. Sur.
Material.

MOORE COUNTY

Alma Oil Co.'s No. 1 Jones, 330 ft. N and W, Sec. 171, Blk. 3-T, T.&N.O. Sur.
Fishing 3,342 ft.; 12,000,000 ft. of gas.

Phillips Pet. Co.'s No. 2 J. C. Wilson, Sec. 157, Blk. T-3, T.&N.O. Sur.
T.D. 3,912 ft.; P.B. to 3,191 ft. for gas well.

Texoma Nat. Gas Co.'s No. 1 Haas, 2,672 ft. N, 1,791 ft. E, Sec. 20, Blk. P.M.C., E.I.R.R. Sur.
Drlg. 1,132 ft.

Texoma Nat. Gas Co.'s No. 3-P Sneed, 3,734 ft. N and E of M. George Sur.
S.D. 1,167 ft.

POTTER COUNTY

U. S. Bureau of Mines, No. 3-A Bivins, C NE Sec. 22, Blk. 6, B.S.&F.
Drlg. 3,200 ft.

RANDALL COUNTY

English et al's No. 1 Oxnard.
Swedging csg. 5,355 ft.; T.D. 5,375 ft.

WHEELER COUNTY

Bell O. & G. Co.'s No. 1-B Walker, 330 ft. S and 330 ft. W, Sec. 44, Blk. 24, H.&G.N. Sur.
Cellar.

Bowers & Carvers' No. 1 L. B. Sims, 330 ft. from N line, 330 ft. from E line of SW Sec. 60, Blk. 17, H.&G.N. Sur.
Drlg. 2,166 ft.

Carver Drilling Co.'s No. 1 Rock Island, 1,600 ft. from S line, 2,310 ft. from W line, Sec. 47, Blk. 13, H.&T.C. Sur.
T.D. 1,260 ft.; U.R. csg.

Christie-Hickman's No. 1 Walker, 330 ft. S and E of NE Sec. 49, Blk. 24, H.&G.N. Sur.
Drlg. 2,415 ft.

Cloud et al's No. 1 Farren, 330 ft. N and W, NE SE Sec. 34, Blk. 24, H.&G.N.
Drlg. 420 ft.

Dyke Oil Co.'s No. 1 G. W. Sitter, 330 ft. from N line, 330 ft. from E line, N½ NW Sec. 28, Blk. 24, H.&G.N. Sur.
Drlg. 2,175 ft.; 22,000,000 ft. of gas at 2,160 ft.

Ben G. Barnett's No. 1 Boren, NW cor. NE Sec. 24, Blk. 13, H.&G.N. Sur., 11 miles E and S of Shamrock.
S.D. 1,210 ft.

Johnson et al's No. 1 Grogan, 438 ft. N and 150 ft. W, Sec. 57, Blk. 23, H.&G.N. Sur.
Drlg. 700 ft.

LeFors Pet. Corp.'s No. 1 Perkins, 330 ft. from S line, 330 ft. from W line, Sec. 54, Blk. 24, H.&G.N. Sur.
Rig.

Martin & Son's No. 1 Plummer, 330 ft. N and E, NW SW Sec. 45, Blk. 45, H.&G.N.
Drlg. 200 ft.

Mudge Oil Co.'s No. 1 Dougherty, C SW Sec. 98, Blk. 33, H.&G.N. Sur.
Drlg. 810 ft.

Reno Oil Co.'s No. 1 Mankins, SW SE SE Sec. 54, Blk. 13, H.&G.N. Sur.
T.D. 2,216 ft.; no pipe line connection.

Rogers' No. 1 Timberlake, 330 ft. from N and W of NE NW Sec. 86, Blk. 13, H.&G.N. Sur.
Rig.

Smith Bros.' No. 1 Johnson, 330 ft. N and W, Sec. 34, Blk. 24, H.&G.N. Sur.
Cellar.

Smith Bros.' No. 1 Williams, 330 ft. N and E, W½ SE Sec. 49, Blk. 24, H.&G.N. Sur.
T.D. 2,551 ft.; 1,116 bbls. oil, 5% wtr., first day.

Underwood et al's No. 1 Roach, 330 ft. N and E, Sec. 27, Blk. 24, H.&G.N. Sur.
Drlg. 665 ft.

East Central Texas Wildcats

(Continued from Page 43)

G. S. & S. Co.'s No. 1 O. Popper.
Fishing 2,865 ft.

Hager et al's No. 1 Dallas Land Bank, 200 ft. from S and 100 ft. from N lines of L. Hart Sur., 7 miles SW of Greenville.
Rigged up.

J. C. Hall's No. 1 Parrish, C of 100-ac. tract, N. Delaney Sur., 5 miles N of Lone Oak.
Derrick.

L. G. Priest's No. 1 Amelia Barnett, 1,075 ft. from W line, 330 ft. from S line of J. C. Hamer Sur.
Coring 3,524 ft.; elev. 607 ft.

Winan's No. 1 J. R. Phillips, 320 ft. from S line and 960 ft. from W line of tract and survey, W. J. James Sur.
S.D. 40 ft.

KAUFMAN COUNTY

W. J. Lewis et al's No. 1 D. Clark, 430 ft. from S line and 600 ft. from E line of Sur., 6½ miles NW of Elmo.
S.D. 1,250 ft.

L. P. Kean's No. 1 J. B. Hunter, R. Sowell Sur., 300 ft. from SW and 150 ft. from SE of 50-ac. tract, 4 miles S of Terrell.
S.D. 2,010 ft.

LEON COUNTY

Normangee Corp.'s No. 1 B. H. Henry, 1,850 ft. from E line and 2,700 ft. from N line of survey, Robert Rogers League, 2¼ miles NE of Normangee.
S.D. 2,800 ft.

LIMESTONE COUNTY

Chapman's No. 1 Hunt, 200 ft. from N and 350 ft. from W line 34.75-acre tract, Israel Wood Sur., 3 miles NE of Kosse.
Rigged up.

Doughtry et al's No. 1 S. Welch, 150 ft. from NW and 900 ft. from NE of 77.64-acre tract in A. Varilia Sur., 4 miles W of Groesbeck.
Rigged up.

Pure Oil Co.'s No. 1 Rogers, 330 ft. S and 2,700 ft. W of 320-ac. tract, P. Villeria Sur.
Rig.

Schultz' No. 1 Roy Ward, NE cor. of 73.3-ac. tract, 5 miles W of Mexia Field, Harrison York Sur.
Derrick.

Stewart Bros. and Watson's No. 1 T. N. Wilson, 1,400 ft. W and 330 ft. N of 236.1-ac. tract in Alex W. Patton Sur., 1¼ mi. SE of Prairie Hill.
Drlg. 1,510 ft.

T. V. Waite's No. 1 Barrow, 650 ft. from S and 950 ft. from E line of 320-ac. tract, W. G. McKenzie Sur., 3½ miles NW of Thornton.
Pits.

NACOGDOCHES COUNTY

Murray Oil Co.'s No. 1 C. B. Watkins, 150 ft. from N line and 330 ft. from NW lines of 160-ac. tract, 3 miles S of Caro, H. Y. Bailey Sur.
Fishing 3,925 ft.

Wells et al's No. 1 Z. Ramblin, 900 ft. N and 330 ft. W of SE cor. of tract and survey, J. Simpson Sur., 12 miles NE of Nacogdoches.
Rigged up.

NAVARRO COUNTY

Bennett Brothers' No. 1 T. E. Stewart, 150 ft. from NE line of lease, 10 miles SW of Corsicana, Wm. R. Bowen Sur.
S.D. 1,180 ft.

R. B. Cadding et al's No. 1 Lola Kent, 450 ft. from S line and center of N and E lines of lease, 3 miles NE of Chatfield C. B. Emmons Sur.
S.D. 1,550 ft.
W. J. Keeling et al's No. 1 J. F. Rushing 484 ft. from N line and 150 ft. from W line of 184-ac. tract, 6 miles SW of Richardson, Henry Ford Sur.
T.D. 2,880 ft.
McCullough et al's No. 1 C. Berry, 330 ft. from SE cor. of 35-acre tract, 1 mile W of Dawson, William Moss Sur.
S.D. 625 ft.

RAINS COUNTY

Wadley et al's No. 1 P. F. Jones, 466 ft. out of SW cor. of 22-ac. tract, 2½ miles S of Alba, B.B.B.&C. Sur.
S.D. 4,632 ft.; to deepen.

RED RIVER COUNTY

Abercrombie et al's No. 1 Rowan & Grant, 1,030 ft. W and 400 ft. S of 528-ac. tract, Midkiff Sur., 6½ miles NW of Clarksville.
Drlg. 285 ft.
Dinger's No. 1 W. T. Norris, 1,000 ft. from S and 1,900 ft. from W of 400-ac. tract, Jos. Guest Sur., 1 mile S of Detroit.
Derrick.

RUSK COUNTY

Headwater Oil Co.'s No. 1 F. L. Gary, 371 ft. N of S line and center of E and W lines of 200-ac. tract, 8 miles E and S of Henderson, Jose A. Mora Sur.
Top Austin 3,130 ft.; S.D. 3,197 ft.
George Hudson et al's No. 3 Jeff Phillips 150 ft. from N line of survey and 700 ft. from W line of 100-ac. tract, 4 miles SE of Minden, N. Villaria Sur.
S.D. 3,673 ft.
Ben Lamb's No. 1 H. Leath, 330 ft. out of NW cor. of 155-acre tract in L. J. Dooley
Drlg. 3,381 ft.

SMITH COUNTY

Deck et al's No. 1 Dendall, 330 ft. from S and W of 55-ac. tract, J. Williams Sur. 3 miles E of Van Field.
Spudded and S.D.
Fair et al's No. 1 Rushing, 1,000 ft. SE of old hole. 1¼ miles SE of Whitehouse.
S.D. 4,673 ft.
Paul S. Williams et al's No. 1 Dean, 330 ft. E and 730 ft. N of 100-acre tract in Denson Moore Sur., 1 miles NE of Bullard.
Drlg. 2,296 ft.

VAN ZANDT COUNTY

Delcambre et al's No. 2 Crim, 400 ft. from S and 150 from E lines, Nacogdoches Co. School Lands.
Location.
Pet. P. L. & Storage Co.'s No. 4 Mrs. S. McGee, 450 ft. S of N line and 155 ft. E of W line of 53.4-ac. tract, Blk. 20.
S.D. 1,268 ft.
Pete Corley et al's No. 1 Slaton, 160 ft. from W and 660 ft. from N lines of William Carlton Sur., 3 miles SE of Ben Wheeler.
Elev. 514 ft.; drlg. 3,860 ft.
Florence Oil Co.'s No. 2 Sanger, 216 ft. W of SE cor. and 151 ft. S of S line of Pure-Blackstock lease, John Walling Sur Rig.
Gillum and Allen et al's No. 1 A. T. Bass 150 ft. from W line and 150 ft. from N line of 10-ac. tract, William Hart Sur.
S.D. 1,700 ft.
Green and Winn's No. 1 Eaton, 330 ft. out of most westerly SW cor. of J. Wilson Sur., 2 miles SE of Martin.
Location.
American Oil Co.'s No. 1 Bryant, 483 ft. N of same operator's dry hole, Nacogdoches County School Land Sur.
Coring 1,252 ft.
Miller et al's No. 1 J. M. Palmer, 150 ft from S and E lines of 69-ac. tract, Nacogdoches County School Land Sur.
S.D. 1,000 ft.
Peden and Olson's No. 1 J. M. Palmer, 300 ft S of No. 2 and 140 ft. from W line of tract, J. Goodman Sur.
S.D. 1,288 ft.
Pruitt & Graham's No. 2 Carter, 40 ft. E of W line and 160 ft. N of N line of Texas Co.'s Carter lease, Wm. Daniel Sur.
S.D. 278 ft.
M. Rouch et al's No. 1 Bearden & Palmer 150 ft. out of SE cor. of 61-ac. tract Nacogdoches C.S.L.
S.D. 1,237 ft.
Wadley's No. 1 Carrus, 500 varas N and 1,000 varas E of most northerly SE cor. of 588-ac. tract, S.P. Sur.
Derrick.

Southwest Texas Wildcats

(Continued from Page 40)

S line and 150 ft. E line, Sur. 291.
Drlg. 1,099 ft.
Humble O. & R. Co.'s No. 1 Ruiz, 2,080 ft. S line, 200 ft. E line of Sec. 553, B.S.&F. Sur.
Drlg. 1,948 ft.; set 10-in. at 123 ft.
W. C. McBride's No. 1-A Hagist, 330 ft. from N and E lines of Blk. 2, Sec. 265.
Drlg. 2,160 ft.
Mills Bennett Prod. Co.'s No. 1 D.C.R.C., 150 ft. N, 4,200 ft. E line of Sur. 192.
T.D. 1,505 ft.; I.P. 15,000,000 ft. of gas; comp.
Stieren Oil Co.'s No. 1 J. P. Philp, 1,650 ft. S line, 990 ft. E line, Sur. 330.
Drlg. 2,935 ft.
Texas Co.'s No. 2 Graham, 396 ft. SE line, 1,650 ft. SW line of Sur. 571.
Drlg. 2,400 ft.

EDWARDS COUNTY

Will Olhausen's No. 1-E Turney, 660 ft. from W line, 1,632 ft. from N line of Sec. 176, C.C.S.D.&R.G.N.G. Sur.
Fishing 330 ft.
H. H. Sides' No. 1 Turney, C.C.S.D.&R.G.N.G. Sur. No. 164, 1,320 ft. N line and W line of survey.
Standing 1,010 ft.
Harry Adams' No. 1 Holman, 1,650 ft. N line, 330 ft. from E line, Sec. 22, C.C.S.D. &R.G.N.G. Sur.
Standing 590 ft.; showing oil.

FAYETTE COUNTY

Clark et al's No. 1 Becker, in townsite of Roundtop.
Location.
Ross Fenton's No. 1 Kasper (263-ac.), 2,000 ft. NW and SW lines of Thos. Green Sur.
Location.

GILLESPIE COUNTY

Ed L. Nixon's No. 3 Lindig, 12,694 ft. S line, 1,333 ft. W line, Maria Josepha Guerra Sur. No. 41, or 6 ft. S of No. 1.
Fishing 650 ft.

GOLIAD COUNTY

Magnolia Pet. Co.'s No. 1 Albrecht, 660 ft. N line, 330 ft. SW line of J. P. Reid Sur.
Drlg. 2,000 ft.

GUADALUPE COUNTY

J. W. Burrows' No. 1 Beuhring, 1,000 ft. S line, 750 ft. W line of Jos. Clements Sur., SW Darst Creek Field.
Location.
H. H. Weinert et al's No. 1 Sylie Schmidt. Wakefield Sur., E of Kingsbury Field.
Rigging up.

HIDALGO COUNTY

Clay, Spencer & Hood's No. 1 Brooks & Showers, 330 ft. N and E lines of Lot 4, Blk. 12, Por. 79-80.
Derrick.
Davis & Harrison's No. 1 Lula George, 302 ft. from S and 700 ft. from E lines of Tract 13, Porcion 41, Ancient Jurisdiction of Reynosa.
Abd. 4,135 ft.
Kingwood Oil Co.'s No. 1 Fairbanks, Porcion 64, 10 miles S of McAllen.
Location.
Union Sulphur Co.'s No. 1 John C. Engleman, 400 ft. S and W lines, Lot 3, Blk. 79, Mestenas tract.
Drlg. 6,150 ft.
Downey & Morton's No. 1 Doskam, 450 ft. from E line, 55 ft. from S line of Blk. 34, Por. 45.
T.D. 2,000 ft.; S.D. for new boilers.
Gato Oil Co.'s No. 1 Brocks & Showers, 500 ft. N line, 400 ft. W line of Tract 8, Blk. 26, Por. 79.
Drlg. 950 ft.
Jenkins & Secton's No. 1 John D. Puckett, 330 ft. N and W lines, Share 96, San Salvador del Tule grant.
Derrick.
Union Sulphur Co.'s No. 2 American Rio Grande L. & I. Co., 400 ft. from S and E lines of tract, Blk. 86, North Capisallo district.
Drlg. 7,850 ft.
Otto Wood's (Kingwood) No. 1 Mrs. Margaret McAllen Fairbanks, on 932-ac. tract in Porcion 64.
Location.

JIM HOGG COUNTY

John D. Norwood's No. 1 C. W. Hellen, 330 ft. N and W lines, Sur. 48.
T.D. 1,370 ft.; S.D. for orders.
J. M. Shugart's No. 1 R. Holbien, 100 ft. from N line, 330 ft. from S line of Blk. 55, Sur. 17 of Holbien Subd., of Las Animas grant.
Drlg. 650 ft.
Sun Oil Co.'s No. 1 A. L. East, 660 ft. from N and E lines of Blk. 4, Sur. 33.
Drlg. 2,958 ft.
Texas Co.'s No. 1 Guiterrez, 2,310 ft. S line, 330 ft. E line of Sur. 165.
Location.

JIM WELLS COUNTY

O. W. Killam's No. 3 Wade, ½ mile SW of Larcro's No. 2 Wade.
Set csg.; depth not reported.
Smith & Storey's No. 1 Martha E. Ellworth, 330 ft. N and W from SE cor. of W half of W 426 acres of Stanley Welch Sur.
Standing 6,115 ft.; P.B. to 3,725 ft.; cemented hole from 3,755 ft. down.

KARNES COUNTY

E. E. Green's No. 1 Miss Olive Henke, 2,640 ft. from SW cor. N along W line, thence at R/A 330 ft., Seguin grant.
Location.
Pacific Gas & Fuel Co.'s No. 2 Choate, near No. 1.
Location.

KERR COUNTY

Edmiston Oil Corp.'s No. 1 Whitworth, 1,160 ft. from S line and 1,333 ft. from E line of Sec. 1,439 of the H.E.&W.T. Sur
S.D. 675 ft.
Jeff Love and Eastland Oil Co.'s No. 5-B Jeff Love, 1,500 ft. SE of No. 1 and 1,580 ft. from SE cor. and 300 ft. from N line of Sec. 1,591.
T.D. 3,465 ft.; waiting on orders.
J. F. Morrissey et al's No. 1 F. A. Karge, 1,400 ft. from S line and 600 ft. from E line of survey, Sec. 1, B.S.&F. Sur.
Drlg. lime 1,903 ft.

LEE COUNTY

Jas. E. Pederson's No. 1 Turner, 1,860 ft from N line, 150 ft. from E line of tract. David Hudson Sur.
T.D. 6,330 ft.; W.O.C.

LIVE OAK COUNTY

Baugh & McMillan's No. 1 Walton & Campbell, D. R. Fant Sur.
Drlg. 700 ft.
W. H. Heimerich's No. 1 Cartwright, 661 ft. from W line, 330 ft. from S line of Lot 16, Seale, Morris & Seale Sur.
Fishing 5,950 ft.
Henderson Coquat et al's No. 1 Little, 1,320 ft. NE of S cor. of M. M. Shipp Sur. and 330 ft. N of S line.
S.D. 4,245 ft.
Loma Oil Co.'s No. 1 Cardwell, 330 ft. SE and SW lines of tract in Sparks Sur.
Drlg. 970 ft.
Loma Oil Co.'s No. 1 Brewer, 330 ft. from SE. and NE lines of 100-ac. tract in Sparks Sur.
Moving in.

MAVERICK COUNTY

Mike Chorgas et al's No. 1 Mathews, on edge of municipal airport at Eagle Pass Reaming 479 ft.

McMULLEN COUNTY

H. K. Boysen's No. 1 Hagist, 990 ft. S, 330 ft. W of NE cor. Sec. 10, H.&T.C.R.Y. Sur
S.D. 1,897 ft.
Byron Rife's No. 1 Edrington, 330 ft. from S and W lines of Sec. 79.
Abd. 3,407 ft.

MEDINA COUNTY

Scoggins & Sanders' No. 1 L. W. Burrell, 150 ft. from E line, 1,750 ft. from N line of M. E. Gage Sur. 395.
Standing 1,325 ft.

MILAM COUNTY

Barron & McGee's No. 1 R. Lundgren, 1,100 ft. NE line, 600 ft. NW line of 125-ac. tract in L. Kimbro Sur.
Location.
C. F. Drake et al's No. 1 Standard Coal Co., 970 ft. SW line, 1,700 ft. SE line of G L. Johnson Sur.
S.D. 2,035 ft.
Frank W. Keller, Inc.'s No. 1 A. L. Lucas, 1,980 ft. from N line, 400 ft. from E line of 175.5-ac. tract in J. Real Sur.
Abd. location.
Second Natl. Bank's No. 1 B. P. Ward, 150 ft. SW line, 950 ft. SE line of 100-ac tract, L. Taylor Sur.
Standing 2,439 ft.

REAL COUNTY

M. J. Heartwell et al's No. 2 L. J. Haby, 494 ft. from W line and 2,153 ft. from S line of A.B.&M. Sur. No. 175.
T.D. 2,837 ft.; moving in new engine.

SAN PATRICIO COUNTY

Allied Minerals' No. 1-A Ramsey, 466 ft. E, 220 ft. N of SW cor. of the North B. Giddings Sur. on a 1,000-ac. tract.
Sandy shale 2,462 ft.; moving in heavier rig; S.D.
Carpenter et al's No. 1 Sadler, Mud Flats area.
Standing 6,009 ft.
Lonnie Glasscock's No. 1 M. F. Timmons, 330 ft. out of SE cor. of Blk. 37, San Patricio townsite.
Drlg. 5,300 ft.; to make a D.S. test at 4,700 ft.; no report.

STARR COUNTY

Armstrong, Emanuel & Adams' No. 1 S.C. C.C., 330 ft. from S and E lines of Blk. 57, Porcion 88-89.
Spudded; previous report in error.
Jules Alford's No. 1 A. Flores, 330 ft. from N and W lines of 10-ac. of E 20-ac. of NW 80-ac. of Tract 250, Por. 38, 5,500 ft. NW discovery well in Hidalgo County.
Standing 3,500 ft.
Conway & Emanuels' No. 1 S.C.C.C., 360 ft. W line, 330 ft. S line, Blk. 62, Jeffries Lambeth Div., Porcion 88-89.
Moving in material.
G. R. Borah's No. 1 A. Guerra, San Jose grant, 330 ft. from N and 150 ft. from E line of Sec. 6 (NE part of county).
Standing 2,687 ft.
Crawford et al's No. 1 Hicks et al, 150 ft. SE and NE line of NW, Perdernal grant.
Drlg. 801 ft.
R. H. Vise's No. 1 Carruth, 3,690 ft. S line, 3,300 ft. W line, Share B-1, Porcion 91-92.
Derrick.
J. T. Kyle et al's No. 1 G.L.&C.C., 330 ft. midway between N and S lines of Lot 4, Porcion 100.
Location.
Merren, Johnson & Jeffries' No. 2 S.C.C.C., 660 ft. N line, 330 ft. W line of Blk. 37, Porcion 88-89.
Drlg. 2,430 ft.
G. L. Smith et al's No. 1 J. M. Longfellow, 330 ft. out of NW cor. of Sur. No. 281.
Drlg. 3,330 ft.
Heep Oil Co.'s No. 1 Guerra, 330 ft. from NE and SE lines of Blk. 35, J. N. Crawford Subd., Porcion 56, Jurisdiction of Mier.
Drlg. 2,900 ft.

To Our Friends

Everywhere . . .

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for a Happy Christmas Season

and the hope

that Fluid Packed Pumps

may contribute

to their prosperity

during the

New Year

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Protected by Patents No. 1545474, 1545475, 1546175, 1621046; others pending.

Smith & Weston's No. 1 M. M. Garcia, Blk. 9, Sur. 966.
Cmt. surface csg. 100 ft.
Sun Oil Co.'s No. 1 Gonsales & Clark, 600 ft. out of NW cor. of NE Sec. 372, T.T. Ry. Sur. No. A-778.
Drlg. 4,651 ft.
United Prod. Co.'s No. 1 Guerra, 36, 170 ft. from NE line, 1,621 ft. from NW line of Porcion 66.
Drlg. hard brown shaley sand 2,404 ft.
E. L. Younkin's No. 1 Kelsey Bass, 320 ft from S line, 7 ft. from W line of Blk. 19 in Porcion 87.
Standing 2,572 ft.

TRAVIS COUNTY

Barron & McGee's No. 1 R. Lundgren, 1,100 ft. NE line, 600 ft. NW line of 135-ac. tract in L. Kimbro Sur.
Drlg. 727 ft.
Mimms, New & Anderson's No. 1 Bohm, 1,250 ft. SW along NW line of Bohm tract from N cor. and 150 ft. NW in S. Del Valle Sur.
Standing 515 ft.
C. A. Stubbs' No. 1 Julius Kerlin, 530 ft. SW line, 450 ft. NW line of 133-ac. tract in I. Lindsay Sur. No. 61.
Standing 709 ft.
Title et al's No. 1 Johnson, 330 ft. each way from cor. of 50-ac. tract in Kimbro area.
Standing 657 ft.

UVALDE COUNTY

T. T. Word's No. 1-B Truelove, 45 ft. E of No. 1-A.
Abd. 3,375 ft.

WEBB COUNTY

Detterhaim & Jones' No. 1 M. Jones, 600 ft. E line, 1,620 ft. S line of Sur. 1,640.
Standing 455 ft.
Payne et al's No. 1 Hoggterp, Blk. 6, Sur 1,110, W of Oilton.
Moving in rig.

WILLACY COUNTY

W. W. Silk's No. 1 Stillman, Lot 16, Blk 30, Santa Rosa Subd., Share 44.
Drlg. 2,000 ft.; no report.
South Texas Dev. Co.'s No. 1 Armendais, 1,500 ft. W of Arroya Colorado River, 1,200 ft. N of S line of Tract 4.
Derrick.

WILLIAMSON COUNTY

Johnson & Ray's No. 1-A Mary Smith Oxford, 350 ft. S, 40 deg. E of No. 1, Williams Sur.
S.D. 715 ft.
Mann & Rees et al's No. 1 F. Rees, John Bevil Sur. 56.
T.D. 1,025 ft.; C.O. caving hole.
T. J. McConnell's No. 1 J. R. Nazier, 150 ft. from S line and San Gabriel River and 150 ft. from E line of 124-ac. tract in Zarco Sur.
Standing 948 ft.
J. Morgan Russell's No. 1 Nelson, 150 ft. S line, 1,115 ft. E line of John L. Justice Sur. No. 2.
Drlg. 818 ft.
J. Morgan Russell's No. 2 Nelson, 3,200 ft from CEL of W. Donaho Sur. No. 117, 1,600 ft. from CSL.
S.D. 375 ft.
Stalley & Caffy's No. 1 A. J. Nelson, 350 ft. from SE line and 150 ft. from NE line of/Barney C. Love Sur.
T.D. 355 ft.; H.F.W.; standing.

WILSON COUNTY

Ray Oil Co.'s No. 1 J. M. McDaniel, 1,700 ft. from SW line, 350 ft. from NW line of 193.5-ac. tract in Concepcion Bostello Sur. No. 9.
Rigged up and S.D.
J. C. Yancey's No. 1 Lyssy, 300 ft. from SE and SW lines of lease in D. J. Holt Sur.
T.D. 1,600 ft.; S.D. in shale.

ZAPATA COUNTY

Danvers & Harrison's No. 1 M. J. Vela, 680 ft. NE line and 300 ft. NW line, or 3,140 ft. E line and 330 ft. N line of Por. 39, Blk. 7, Bela Subd.
T.D. 1,603 ft.; reaming at 1,400 ft.
Merle Gunby's No. 4 Alice D. Haynes, 760 ft. from SE line, 200 ft. from SW line of Blk. 4, Haynes Subd. of Comitas & Villa grant.
Rigging up.
R. B. Morrison's No. 1 Vela, 1,320 ft. SW line, 660 ft. SE line of Blk. 5, Re-Plat of Jamison Subd., Por. 20.
Rigging up.
Joe Palmer's No. 1 J. M. G. Martinez, 150 ft. SE and SW line, Blk. 37, Sur. 434.
Standing 640 ft.
A. H. Wray's No. 5 Gopher Trust, 330 ft NE and NW lines of Blk. 12, Sur. 1, San Ignacia Subd., Borrego grant.
Drlg. 1,406 ft.

Southwest Texas Proven

Week Ending December 15

NORTH DALE POOL—BASTROP COUNTY

Cole Pet. Co.'s No. 1 Rubin Gage, NE cor. of tract, 150 ft. each way from corner.
Location.
Marts & Beaver's No. 1 Voss, 875 ft. from SW line, 155 ft. from NW line of 100-ac. tract, in Litton Sur. No. 1.
Location.
Joe E. Mills' No. 1 Mrs. W. J. Cardwell, 900 ft. from SE line, 1,200 ft. from SW line of tract, J. A. Navarro Sur.
S.D. 1,324 ft.
Ogden & Reed's No. 3 M. F. Tally, 300 ft. NE line, 200 ft. SE line of 70-ac. tract in Joshua Gray Sur.
Drlg. lime 2,199 ft.
Porter and Neal's No. 1 J. P. Wolff, 150 ft. from NE line, 2,800 ft. from SE line of F. Edmundston Sur.
Spudded and S.D.

CAESER—BEE COUNTY

Falvey et al's No. 1 J. J. Grissom, 150 ft. N and W lines of 771.9-ac. of McManly Sur.
Spudded.
Luling O. & G. Co.'s No. 6 (B-4) Ruhmann, 150 ft. N line, 300 ft. W line of Blk. 29.
Coring 3,000 ft.

NORTH PETTUS FIELD—BEE, GOLIAD AND KARNES COUNTIES

United Prod. Co.'s No. 47 Ray, 300 ft. NW from SW cor. of Houston Oil Co.'s Neihaus "B" lease along Neihaus-Ray property line, thence 330 ft. in SW direction at R/A to previous course.
Abd. 3,960 ft.

TULETA—BEE COUNTY

Blanco Oil and Buchanan's No. 2 Perez, 300 ft. from S and E lines of their 100-ac. "A" lease.
Drlg. below surface csg.
Heyser, Heard & Jones' No. 3 (B-2) Rapp
Coring 3,500 ft.
Heyser, Heard & Walton's No. 1 Perez, C of Blk. 9, of SE Sec. 8.
Showed S.W.; T.D. 3,975 ft.; P.B.
Edwin M. Jones' No. 2 Robinson, 330 ft. from S line, 990 ft. from E line of SW of Sec. 5.
Location.
Houston Oil Co.'s No. 1 Ed Strauss, C of Blk. 2, SW Sec. 9, Uranga grant.
Moving in material.
Mills Bennett's No. 2 Harris, 990 ft. from E line, 330 ft. from S line of tract.
Drlg. 2,000 ft.
Mills Bennett's No. 1 Roper, SW offset to No. 1 Silcock.
Moving in tools.
Mills Bennett's No. 1 Silcock, 330 ft. S and W of NE cor. Sec. 9, Uranga grant.
T.D. 4,226 ft.; P.B. and perforated csg. 3,898-3,901 ft.
Mills Bennett's No. 2 Silcock, 330 ft. from S and E lines of 160-ac. tract.
Location.
Mills Bennett's No. 1 Tuleta Mercantile Co., 330 ft. from N and W lines of SW Sec. 10.
Derrick.
Whisenant & Trenchard's No. 1-B Rapp.
Comp.; est. 300 bbls. on ¼-in. choke; T.D. 3,907 ft.

HOCH—BEXAR COUNTY

H. J. Trawalter's No. 7 fee, 150 ft. from N line, 450 ft. from E line of 202-ac. tract in S. Jett Sur. No. 53.
Standing 450 ft

ALTA MESA—BROOKS COUNTY

Mrs. Florence East's No. 1 G. Madrigal, 300 ft. S line, 300 ft. E line of Share "B." R. G. Salinas grant.
Drlg. 2,100 ft.

DALE—CALDWELL COUNTY

W. B. Hinton's No. 1 Osteen, 150 ft. SW line, 450 ft. NE line of 70-ac. tract in Swearingen Sur.
T.D. 2,043 ft.; R.U. to pump.
McNeil Pet. Co.'s No. 1 J. M. Miears, 660 ft. NW line, 700 ft. SW line of 327-ac. tract in W. C. Swearingen Sur.
Drlg. 1,518 ft.

DUNLAP—CALDWELL COUNTY

Moseley's No. 1 J. M. Pierce, 150 ft. E line, 400 ft. S line of G. C. and W. P. Walker tract, Seale Sur. No. 8.
Drlg. 2,098 ft.

GOVERNMENT WELLS POOL—DUVAL COUNTY

Brown & Nessly's No. 1 Curry, 330 ft. N line, 960 ft. W line of SW, Sur. 62.
Standing 2,300 ft.
Brown & Nessly's No. 3 Runnels, 330 ft. S line, 990 ft. W line of NE NW Sur. 62.
Location (reported drilling in error).
Edgington & Murray's No. 1 C. W. Hahl, 330 ft. N and E lines, Blk. 16, Sur. 250.
Skidding rig; standing 250 ft.
Felix Oil Co.'s No. 3 Norton, 330 ft. N and E lines, SW of Sur. 62.
W.O.C. 2,373 ft.
Gov. Wells Oil Co.'s No. 8 State, 330 ft. W line, 990 ft. N line of NE of Sur. 62.
I.P. 12 bbls. per hr.; comp.
Government Wells' No. 9 State, 330 ft. from N line, 2,310 ft. from W line of Sur. 60.
Drlg. 1,013 ft.
Magnolia Pet. Co.'s No. 2 Duval County Ranch, 330 ft. from S line, 990 ft. from E line of Sur. No. 57.
Derrick.
Magnolia Pet. Co.'s No. 11 J. O. Wilson, 330 ft. from S and E lines of Sur. 136.
Rig up.
Magnolia Pet. Co.'s No. 1 Ruiz, 330 ft. N and E lines of W½ Sec. 68.
Drlg. 3,000 ft.
Magnolia Pet. Co.'s No. 10 J. O. Wilson, 330 ft. N and E lines of Sur. 348.
T.D. 2,433 ft.; I.P. 25 bbls. pumping; comp.
Magnolia Pet. Co.'s No. 10 Hahl-Sutherland, 1,650 ft. N and W lines of Sur. 61.
W.O.C. 2,304 ft.
Magnolia Pet. Co.'s No. 1 A. Herbst, 330 ft. S and E lines of Sur. 70.
Drlg. 1,047 ft.
Newton & Andrews' No. 1 Bowe, 330 ft. S and W lines of Blk. 21, Sur. 250.
Testing 2,308 ft.
Russ Pet. Co.'s No. 3-C Hahl, 330 ft. from N and E lines of NW of Sur. 62.
Location.
Russ Pet. Co.'s No. 5-C Hahl, 330 ft. S and E lines of SW NW of Sur. 62.
Fishing 1,850 ft.
Salt Dome Oil Co.'s No. 1 Moody, 330 ft. from N line, 1,370 ft. from W line of Sur. No. 60.
Rig up.
Smith & Story's No. 13 Luncell, 330 ft. S line, 990 ft. W line of Sur. 48.
Rigging up.
Sun Oil Co.'s No. 4 Winch & Henne, 330 ft. S and E lines of lease, Blk. 15, Sur. 250.
Testing 2,362 ft.
Texas Co.'s No. 12 D.C.R.C., 1,500 ft. S line, 480 ft. W line of SE of Sur. 362.
Moving in rig.
Texas Co.'s No. 7 B.D.L.C., 330 ft. S and W lines of Sur. 135.
Testing 2,360 ft.
E. R. Thoas' No. 1 Bishop Cattle Co., 2,325 ft. E line, 330 ft. N line of S½ of Sur. 126.
Location.
Trapshooter Reilly's No. 6 Hahl, 865 ft. N line, 330 ft. E line of Blk. 27, Sur. 250.
T.D. 2,360 ft.; I.P. 40 bbls. daily; comp.
J. H. Winch's No. 1 Smith Corkill, 1,667 ft. NW line, 990 ft. SW line of Sur. 491.
Drlg. 2,498 ft.

HOFFMAN—DUVAL COUNTY

Southwest Drlg. Co.'s No. 1 Cuellar, 330 ft. SW and NW line of NE of Sur. 114
Drlg. 1,103 ft.

DARST CREEK—GUADALUPE COUNTY

Grayburg Oil Co.'s No. 1 Appling, 150 ft. W of E cor. of 15-ac. tract in J. Hodges Sur.
Reaming to set csg. 2,424 ft.

LUCAS—LIVE OAK COUNTY

Lion Oil & Ref. Co.'s No. 2 McNeil, J. Curry Sur., 660 ft. N of No. 1.
T.D. 6,035 ft.; C.O.
Houston Oil Co.'s No. 29 Cartwright
Preparing to run csg. 5,260 ft.

SAM FORDYCE—HIDALGO COUNTY

W. E. Butler's No. 1 F. B. Guerra, 93 ft. N line, 294 ft. S and W lines of 2.5-ac. tract in Tract 254, Por. 39-40.
Location.
Jack Clements' No. 1 Felipe Farias, 150 ft. from N and E lines of Share 273, Por 39.
Reynosa
Coring 2,700 ft.
Cosmo Pet. Co.'s No. 1 F. B. Guerra, 330 ft. W line, 130 ft. N and S lines of N 25-ac. of S 100-ac. of E 290-ac. of Tract 254, Por. 39-40.
Spudded.
Danvers-Harrison & Davis' No. 1 Dr. Austin, center of E 7.2-ac. of S 14.4-ac in Share 282, Por. 39.
Location.
Davis & Harrison's No. 1 Smith, S offset to No. 1 Guerra, of D. & H.
Location.
M. Porter Evans' No. 1 John W. Lawrence, 330 ft. from N and W lines of W 19.64 ac., Share 274, Por. 39.
T.D. 2,754 ft.; I.P. 25 bbls. per hr.; comp.
Porter Evans' No. 1 David Flores, Tract 262, Por. 38.
S.D. 2,220 ft.
Henshaw Oil Corp.'s No. 1 Seabury et al, C of SW 11.5 acres of NE 45.25 acres, Tract 256, Por. 38
Location.
R. C. Horne's No. 1 F. B. Guerra, 93 ft. S line, 294 ft. E and W lines of NW 2.5-ac. tract in S 125 acres of E 290 acres of Tract 254, Por. 39-40.
Location.
T. I. Larson's No. 1 G. G. Salinas, 330 ft. S and W lines of Share 10, Por. 41.
Drlg. 2,820 ft.
Moncrief & Showers' No. 2 John Lawrence, 305 ft. N line, 241 ft. E line of 13.5-ac., Tract 274, Porcion 39.
Moving in derrick.
Moncrief & Showers' No. 2-B John Lawrence, 305.5 ft. N of S line, 580.6 ft. S of No. 1-B, 240.6 ft., or midway between E and W lines of Tract 274, Por. 39.
Rigging up.
Moncreif & Showers' No. 1 C. E. Smith, Tract 3-B, Por. 41.
Moving in machinery.
Moss & Bass et al's No. 1 F. B. Guerra, 245 ft. N line, 300 ft. W line of 25 acres of S 50 acres of E 290 acres, Tract 254, Por. 40.
Location.
Navarro Oil Co.'s No. 2 Seabury, 330 ft. S and W lines of N 25-ac. of SE 51-ac., Tract 256, Por. 38.
Spudded.
Newman et al's (Imperator Oil Co.) No. 1 A. Flores, 2,400 ft. E of discovery well.
T.D. 2,783 ft.; I.P. 15 bbls. per hr.; comp.
Phillips Pet. Co.'s No. 1 Seabury et al, Tract 278, Por. 40.
Spudded and S.D.
Hiram Reed's No. 1 Farias, Tract 268, Porcion 39.
Set surface csg.
Reynosa Oil Co.'s No. 1 Guerra, 330 ft. from W line, midway between N and S lines of NW 10-ac. of SW 40 acres of Tract 254, Porcion 39.
Abd. location.
Reynosa Oil Co.'s No. 1 P. S. Rivas, 330 ft. from N line, 258 ft. from W line of N 30-ac., Tract 393, Por. 39.
Abd. location.
Rogers O. & G. Co.'s No. 1 Guerra
Set surface csg.
Ed Sullivan's No. 1 E. B. Guerra, center of NE 10.77 acres of SW 40.7 acres of Tract 254, Por. 39.
Location
Ed Sullivan's No. 1 E. Flores, 330 ft. N line, 107 ft. E and W lines of Tract 266, Por. 38.
Abd. location.
Van Dresar et al's No. 1 W. R. Jackson, 330 ft. from N and W lines of 92-ac. tract, Por. 38-39-40, Blk. 273.
Location.
Weekly Oil Corp.'s No. 1 Smith, Tract 278, Porcion 40.
Running csg.; T.D. 2,750 ft.
Otto Woods' (Kingwood) No. 4 F. B. Guerra, 330 ft. S and E lines of NW 30 acres of S 150 acres, Tract 254, Por. 39
Moving in derrick.
Otto Woods' (Kingwood) No. 1 Lawrence.
Drilled plugs at 2,754 ft.
Otto Woods' No. 4 John Lawrence, 330 ft from E line, 250 ft. from S line of W 40 acres, Tract 274, Por. 39.
Rigging up.

SANDIA—JIM WELLS COUNTY

Walsh & Long's No. 1 Allen.
Derrick.

SEELIGSON—JIM WELLS COUNTY

Magnolia Pet. Co.'s No. 5 Seeligson, 1,320 ft. N, 660 ft. E of No. 2 well on Farm 1, Blk. 4 of Canalas Sur.
Location.

JACOB POOL—McMULLEN COUNTY

American Gas Co.'s No. 1 L. Jacobs Corp., 350 ft. W of SE cor., 160 ft. SE line of tract in Fadden Sur.
Spudded and S.D.
Jane Oil Co.'s No. 2 H. L. Lark, 500 ft. N of No. 2.
Drlg. 225 ft.
Loma Oil Co.'s No. 32-A Jacob, 660 ft. S of No. 31-A.
Moving in rig.
Motes & Bettingfield's No. 2 Lark, 660 ft. S of No. 1 and 330 ft. W line of lease.
Moving in rig from No. 2.
Newton et al's No. 1 Murphy, SW cor. of Sur. 480.
Drlg. 1,610 ft.
Stewart & Holding Co.'s No. 3 Jacob, 660 ft. S and 660 ft. E of No. 3, John Faddes Sur.
T.D. 895 ft.; S.D.
R. P. Whitefield's No. 2 Jacob, 240 ft. E line, 275 ft. S line of 70-ac. tract cut of NE cor. Sec. 9, 314 ft. S of No. 1.
Abd. 895 ft.

SINTON—SAN PATRICIO COUNTY

Heep Oil Corp.'s No. 2 R. Welder, 466 ft from S line, 2,000 ft. from E line of Adeline Welder tract in Victor Loupsey Sur
Derrick.
Heep Oil Corp.'s No. 4 R. Welder, 466 ft from S and W lines, 200-ac. tract, Victor Loupsey Sur.
T.D. 7,220 ft.; perforated csg. at 5,883 ft.
Plymouth Oil Co.'s No. 3-B Welder, start at SW cor. of "B" lease, thence NW along the W line 2,100 ft., thence 350 ft. NE at R/A.
T.D. 5,387 ft.; D.S. stuck.

LOS OLMOS—STARR COUNTY

J. P. Kennedy's No. 3 Kelsey-Bass, 200 ft. SE of No. 7 Kelsey-Bass in Blk. 7 of Porcions 75, 76 and 77.
Drlg. 700 ft.

CUEVITAS POOL—STARR COUNTY

Sun Oil Co.'s No. 5-C M. Guerra & Son, 1,320 ft. NE of No. 4-C La Sacatosa grant.
Location

RIO GRANDE CITY—STARR COUNTY

Goodwin & Zimmerman's No. 1 Ida Davis, 33 ft. SW line, 576 ft. NW line of Blk. 16, Tract 4, Share 78, Por. 81.
Set csg. 1,450 ft.

AGUA DULCE—NUECES COUNTY

Clymore Prod. Co.'s No. 1-C Ollie Purl, 660 ft. N and E lines of Lot No. 2, Sec. 7, Peters Subd. No. 3.
Moving in rig.

SAXET—NUECES COUNTY

Southern Mineral Corp.'s No. 4 Ocher, 1,320 ft. S line and 417 ft. E line of Ocher 302.52-ac. tract in Sec. 8.
Derrick.

WEST COLE POOL—WEBB COUNTY

American Liberty Oil Co.'s No. 10-A Bruni, 330 ft. from SW line, 260 ft. from SE line of Sur. No. 6, Arispe Grant Sur.
Location.
American Liberty Oil Co.'s No. 11-A Bruni, 508 ft. from NE line, 260 ft. from NW line of Sur. No. 8, Arispe Grant Sur.
Location.
American Liberty Oil Co.'s No. 12-A Bruni, 777 ft. from SW line, 330 ft. from SE line of Sur. No. 6.
Location.
American Liberty Oil Co.'s No. 7-A Bruni, 2,172 ft. NW line, 777 ft. SW line of Sur 6, Foltz Subd., M. Arispe grant.
T.D. 3,424 ft.; I.P. 40 bbls.; comp.
American Liberty Oil Co.'s No. 8-A Bruni, 883 ft. NW line, 777 ft. SW line of Sur. 6, M. Arispe grant.
Location.
Herman Brown's No. 4 Bruni Est., 418 ft. NE line, 260 ft. SE line, Blk. 7, Sur. 5 Arispe grant.
Drlg. 397 ft.
Cole Pet. Co.'s No. 88 R. Benavides, 990 ft. SW line, 330 ft. SE line, of Sur. 1.
Drlg. 2,497 ft.
Highland Oil Co.'s No. 1 Bruni, 152 ft. SW line, 330 ft. NW line, Sur. 7.
T.D. 3,417 ft.
Kalmore's No. 1-B Bruni, 330 ft. to W line, 418 ft. SW line, Blk. 33, Sur. 5, Adams Subd., Mariano Arispe grant.
No report.
O. W. Killam's No. 30 Bruni Est., 330 ft. SE line, 1,437 ft. SW line of Sur. 6, M. Arispe grant.
Coring 2,949 ft.
Magnolia Pet. Co.'s No. 5 Brennan-Benavides, 284 ft. NW cor. of Blk. 456-467, on lines of Blk. 466-467, M. E. Hale Subd., Arispe grant.
Drlg. 2,198 ft.
Sun Oil Co.'s No. 2 Bruni, 418 ft. NE line, 260 ft. SE line, Blk. 9, Sur. 5.
T.D. 3,429 ft.; I.P. 35 bbls. per hr.; comp.
Starr State Oil Co.'s No. 11 Yeager, 200 ft. S line, 450 ft. E line of 632-ac. tract in Share 5 of Los Animas grant.
S.D. 3,496 ft.

BYERSVILLE—WILLIAMSON COUNTY

Ogden & Reed's No. 1 (2) C. G. Zieschang, 3,500 ft. SE line, 150 ft. SE line of 200-ac. tract in H. White Sur.
Rigging up.
G. L. Rowsey's No. 5-A Heep.
Standing 897 ft.

BLAS URIBE—ZAPATA COUNTY

O. W. Killam's No. 9 Bruni, 180 ft. SE line, 400 ft. NE line of Blk. 9, Blas Uribe tract, Borrego grant.
Drlg. 98 ft.

JENNINGS—ZAPATA COUNTY

Texas Co.'s No. 59 Whitehead, 1,765 ft. from SE line, 17,110 ft. from SW line of Cerrito Blanco grant
T.D. 1,206 ft.; I.P. 10 bbls. daily; comp.

MARTINEZ—ZAPATA COUNTY

Benn Banner's No. 1 M. Trevino, 556 ft. N line, 200 ft. E line of Blk. 17, Sur. 411
T.D. 1,632 ft.; I.P. 15,000,000 ft. of gas; comp.
S.R.C. Oil Co.'s No. 4-F Cuellar, 1,190 ft E line, 160 ft. N line of Blk. 20, Sur. 411
T.D. 1,657 ft.; I.P. 15,000,000 ft. of gas; comp.
S.R.C. Oil Co.'s No. 5-F Cuellar, 200 ft. E line, 1,534 ft. N line of Blk. 21, Sur. 411.
Location.

Bureau of Mines Statistics for Month of October, 1934

SUPPLY AND DEMAND OF ALL OILS

(Thousands of barrels of 42 gallons)

	October, 1934	September, 1934	October, 1933	Jan.-Oct., 1934	Jan.-Oct., 1933
NEW SUPPLY:					
Domestic production:					
Crude petroleum	76,776	75,810	76,077	761,872	763,533
Daily average	2,477	2,527	2,454	2,506	2,512
Natural gasoline	3,238	3,046	2,998	29,769	27,841
Benzol*	112	109	139	1,363	1,132
Total production	80,126	78,965	79,204	793,004	792,506
Daily average	2,585	2,632	2,555	2,609	2,607
Imports:					
Crude petroleum	†2,266	†2,490	1,727	27,751	27,142
Refined products	1,378	1,357	933	12,535	11,684
Total new supply, all oils	83,870	82,812	81,863	833,290	831,332
Daily average	2,705	2,760	2,641	2,741	2,735
Increase in stocks, all oils	‡7,586	‡3,562	‡4,942	‡32,632	23,475
DEMAND:					
Total demand	91,456	86,364	86,805	855,922	807,857
Daily average	2,950	2,845	2,800	2,816	2,657
Exports:					
Crude petroleum	3,277	4,068	2,888	34,011	30,643
Refined products	5,957	§5,890	6,683	61,055	57,840
Domestic demand:					
Motor fuel	37,544	§34,877	33,032	340,913	318,119
Kerosene	3,957	3,451	3,434	34,841	30,556
Gas oil and fuel oil	27,906	24,483	27,933	268,956	255,458
Lubricants	1,677	1,387	1,505	15,599	13,977
Wax	75	56	122	734	1,031
Coke	629	487	1,098	6,352	7,984
Asphalt	1,491	1,482	1,269	11,424	10,272
Road oil	692	966	555	7,454	4,720
Still gas (production)	3,787	3,329	3,990	36,951	35,189
Miscellaneous	131	173	109	1,492	1,231
Losses and crude used as fuel	4,333	4,215	3,197	36,139	27,837
Total domestic demand	82,223	§75,406	76,234	760,856	719,374
Daily average	2,652	2,514	2,459	2,503	2,366
STOCKS:					
Crude petroleum	346,415	343,937	356,849	346,415	356,849
Natural gasoline	4,176	4,611	3,287	4,176	3,287
Refined products	228,990	233,619	255,533	228,990	255,533
Total, all oils	579,581	587,167	615,669	579,581	615,669
Days' supply	196	206	220	206	232

*From Coal Division. †Receipts of foreign crude as reported to Bureau of Mines. ‡Decrease. §Revised.

COMPARATIVE ANALYSES

(Thousands of barrels of 42 gallons)

	October, 1934 Total	October, 1934 Daily av.	September, 1934 Total	September, 1934 Daily av.	Jan.-Oct., 1934	Jan.-Oct., 1933
CRUDE PETROLEUM:						
Runs to stills	75,388	2,432	73,389	2,446	743,951	722,353
MOTOR FUEL:						
Production	36,231	1,169	34,956	1,166	351,804	342,693
Imports	.....	.....	.....	.....	.....	112
Exports*	1,966	63	†1,879	63	20,523	24,768
Stocks, gasoline	45,087	.....	47,931	.....	45,087	50,841
Stocks, natural gasoline	4,176	.....	4,611	.....	4,176	3,287
Domestic demand	37,544	1,211	†34,877	1,163	340,913	318,119
KEROSENE:						
Production	4,822	156	4,181	139	44,010	40,883
Imports	.....	.....	.....	.....	.....	.....
Exports	975	31	803	27	8,341	7,042
Stocks	7,385	.....	7,495	.....	7,385	8,118
Domestic demand	3,957	128	3,451	115	34,841	30,556
GAS OIL AND FUEL OIL:						
Production	27,064	873	27,279	909	270,492	258,702
Transfers‡	620	20	379	13	6,522	6,927
Imports:						
Bonded warehouses	503	16	593	20	7,837	5,300
For domestic use	514	17	417	14	3,356	5,668
Exports	2,237	72	2,401	80	23,189	16,470
Stocks	119,076	.....	120,518	.....	119,076	134,922
Domestic demand	27,906	900	24,483	816	268,956	255,458
Railroad (Class I)§	(¶)	(¶)	3,756	125	†32,716	†39,439
Pub. util. pow. plants**	905	29	840	28	8,625	8,068
Other	27,001	871	19,887	663	227,615	217,951
Bunker oil	2,289	74	2,261	75	24,469	27,604
LUBRICANTS:						
Production	2,145	69	2,106	70	21,937	19,188
Imports	.....	.....	.....	.....	.....	1
Exports	494	16	595	20	6,429	6,956
Stocks	6,939	.....	6,965	.....	6,939	6,950
Domestic demand	1,677	54	1,387	46	15,599	13,977
WAX (thous. of pounds):						
Production	39,480	1,274	33,880	1,129	391,720	384,160
Imports:						
Bonded warehouses	.....	.....	44	1	3,542	1,344
For domestic use	2,507	81	2,404	80	29,943	25,011
Exports	16,871	544	21,255	709	165,042	209,226
Stocks	123,099	.....	118,991	.....	123,099	76,600
Domestic demand	21,008	678	15,784	526	205,897	288,614
COKE (short tons):						
Production	129,200	4,168	116,000	3,867	1,089,400	1,323,800
Stocks	464,100	.....	454,200	.....	464,100	891,300
ASPHALT (short tons):						
Production	267,300	8,623	262,700	8,757	2,307,400	1,956,400
Imports (natural)	.....	.....	700	22	15,000	16,800
Stocks	291,900	.....	314,500	.....	291,900	242,200

*Includes benzol, 875 bbls. in October, 1934. †Revised. ‡Net transfers in California. §Interstate Commerce Commission. ¶Not available. ‖January-September. **U. S. Geol. Survey

INDICATED DOMESTIC DEMAND FOR CRUDE PETROLEUM

(Thousands of barrels of 42 gallons)

Domestic petroleum by fields of origin:	October, 1934 Total	October, 1934 Daily av.	September, 1934 Total	September, 1934 Daily av.	Jan.-Oct., 1934	Jan.-Oct., 1933
Appalachian:						
Pennsylvania Grade	2,126	69	2,097	70	20,632	18,701
Other (inc. Kentucky)	642	21	780	23	5,737	5,462
Lima-N.E. Ind.-Mich.	955	31	1,010	34	10,197	6,774
Ill.-S.W. Ind.	340	11	395	13	4,129	4,398
Mid-Continent:						
N. La. and Ark.	1,752	56	1,621	54	18,528	19,434
W. Texas-S.E. N. Mex.	6,016	194	5,276	176	59,050	62,916
East Texas	18,069	583	17,232	574	165,457	402,994
Other (Okla., Kans., N. Tex., etc.)	26,105	842	26,868	896	260,950	
Gulf Coast	7,544	243	7,245	241	65,553	62,686
Rocky Mountain	1,732	56	1,619	54	14,438	12,752
California	13,354	431	13,396	447	139,097	138,773
Total demand	78,634	2,537	77,459	2,582	763,673	735,890
Exports	3,277	106	4,068	136	34,011	30,642
Domestic demand	75,357	2,431	73,391	2,446	729,662	705,247
Foreign petroleum	2,467	80	2,478	83	27,936	31,077
Total domestic demand	77,824	2,511	75,869	2,529	757,598	736,324

PRODUCTION OF CRUDE PETROLEUM BY DISTRICTS

(Thousands of barrels of 42 gallons)

	October, 1934 Total	October, 1934 Daily av.	September, 1934 Total	September, 1934 Daily av.	Jan.-Oct., 1934	Jan.-Oct., 1933
Appalachian:						
Pennsylvania Grade	2,140	69	1,966	66	19,990	17,542
Other (inc. Kentucky)	609	20	579	19	5,379	5,200
Lima-N.E. Ind.-Mich.	1,012	33	989	33	9,885	7,040
Ill.-S.W. Ind.	418	13	446	15	4,518	4,059
Mid-Continent:						
N. La. and Ark.	1,664	53	1,599	53	16,923	18,127
W. Texas-S.E. New Mex.	5,603	181	5,953	198	55,590	59,007
East Texas	15,452	499	15,706	524	154,445	177,380
Other (Okla., Kans., N. Tex., etc.	26,212	846	25,481	850	265,121	255,447
Gulf Coast	7,493	242	7,409	247	68,492	62,817
Rocky Mountain	1,718	55	1,630	54	15,198	12,354
California	14,454	466	14,053	468	146,331	143,560
Total	76,776	2,477	75,810	2,527	761,872	763,533

PRODUCTION OF CRUDE PETROLEUM BY STATES AND PRINCIPAL FIELDS

(Thousands of barrels of 42 gallons)

	October, 1934 Total	October, 1934 Daily av.	September, 1934 Total	September, 1934 Daily av.	Jan.-Oct., 1934	Jan.-Oct., 1933
Arkansas	927	30	894	30	9,331	9,333
California:						
Huntington Beach	1,218	39	1,187	40	12,666	9,850
Kettleman Hills	1,838	59	1,822	61	17,779	18,515
Long Beach	1,860	60	1,804	60	19,340	20,789
Santa Fe Springs	1,131	37	1,125	37	12,358	15,788
Rest of State	8,407	271	8,115	270	84,188	78,618
Total California	14,454	466	14,053	468	146,331	143,560
Colorado	103	3	110	4	961	767
Illinois	352	11	378	13	3,826	3,477
Indiana	66	2	68	2	692	594
Kansas	3,987	129	3,716	124	38,943	34,830
Kentucky	458	15	444	15	3,974	3,833
Louisiana:						
Gulf Coast	2,433	79	2,172	73	18,380	12,488
Rest of State	737	23	705	23	7,592	8,288
Total Louisiana	3,170	102	2,877	96	25,972	20,776
Michigan	921	30	912	30	9,053	6,155
Montana	414	13	377	12	2,993	1,850
New Mexico	1,457	47	1,448	48	13,989	11,581
New York	350	11	319	11	3,129	2,604
Ohio:						
Central and Eastern	296	10	259	8	2,723	2,683
Northwestern	91	3	77	3	832	873
Total Ohio	387	13	336	11	3,555	3,556
Oklahoma:						
Oklahoma City	4,785	154	4,610	154	53,265	56,717
Seminole	3,074	99	2,901	97	32,162	34,861
Rest of State	6,712	217	6,360	211	66,444	66,607
Total Oklahoma	14,571	470	13,861	462	151,871	158,085
Pennsylvania	1,270	41	1,184	40	12,099	10,464
Tennessee	1	.....	1	.....	9	4
Texas:						
Gulf Coast	5,060	163	5,237	174	50,112	51,329
West Texas	4,186	135	4,537	151	41,947	47,721
East Texas	15,453	499	15,706	524	154,445	177,380
Panhandle	1,762	57	1,736	58	16,809	14,205
Rest of State	5,892	190	6,168	206	57,493	54,319
Total Texas	32,353	1,044	33,384	1,113	320,811	344,954
West Virginia	374	12	337	11	3,435	3,154
Wyoming:						
Salt Creek	580	19	511	17	5,413	5,925
Rest of State	581	19	600	20	5,485	3,506
Total Wyoming	1,161	38	1,111	37	10,898	9,431
Total United States	76,776	2,477	75,810	2,527	761,872	763,533

*Final figures, includes Alaska, Mississippi, Missouri, and Utah.

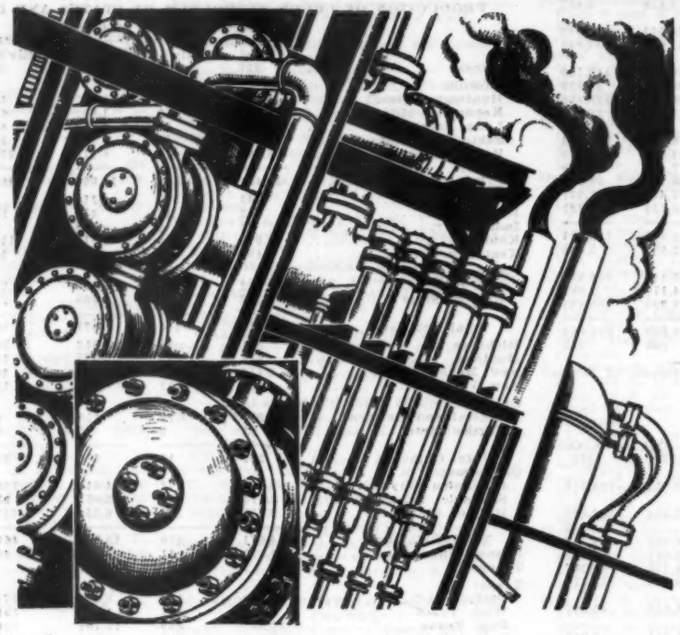
STOCKS OF CRUDE PETROLEUM

(Thousands of barrels of 42 gallons)

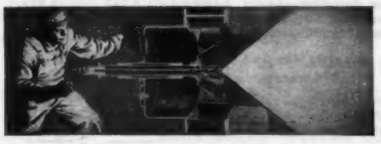
	October 31, 1934	September 30, 1934	October 31, 1933
At refineries by location:			
East Coast: Domestic	11,356	11,587	9,718
Foreign	2,092	2,278	1,951
Appalachian	1,270	1,331	1,961
Indiana, Illinois, Kentucky, Michigan	4,064	4,063	3,751
Oklahoma, Kansas and Missouri	6,093	5,780	6,232
Texas: Inland	2,081	2,052	2,513
Gulf Coast: Domestic	10,330	10,461	11,267
Foreign	295	283	7
Louisiana Gulf Coast: Domestic	3,522	3,543	2,836
Foreign	483	410	538
Arkansas and Inland Louisiana	547	584	1,104
Rocky Mountain	13,621	13,403	12,530
California	8,720	9,196	8,567
Total	65,674	64,971	63,025
At refineries by origin:			
Pennsylvania Grade	1,151	1,191	1,890
Other Appalachian (inc. Kentucky)	604	552	478
Lima-Northeast Indiana-Michigan	457	427	396
Illinois-Southwest Indiana	124	119	85
North Louisiana and Arkansas	2,990	2,255	2,655
West Texas and Southeast New Mexico	3,927	3,817	3,509
East Texas	7,871	8,758	7,837
Oklahoma, Kansas, North Texas, etc.	16,932	15,738	17,316
Gulf Coast	6,450	6,578	5,238
Rocky Mountain	13,488	13,369	12,558
California	9,720	9,196	8,567
Foreign	2,870	2,971	2,496
Total	65,674	64,971	63,025
Pipe-line and tank-farm:			
Pennsylvania Grade	3,805	3,751	3,882
Other Appalachian (inc. Kentucky)	504	539	779
Lima-Northeast Indiana-Michigan	1,073	1,056	1,130
Illinois-Southwest Indiana	11,456	11,378	10,890
North Louisiana and Arkansas	8,287	8,190	9,321
West Texas and Southeast New Mexico	25,528	26,040	29,143
East Texas	27,028	28,687	41,594
Oklahoma, Kansas, North Texas, etc.	141,523	142,585	134,969
Gulf Coast	12,359	13,392	11,688
Rocky Mountain	14,734	14,857	14,776
California	25,895	25,895	27,001
Total	272,192	275,300	285,173
Lease (producers' stocks)	8,549	8,866	8,651
Total refinable crude in the United States	346,415	348,937	356,849

BETHLEHEM STEEL COMPANY | BETHLEHEM, PA.

All Have Established Their



Bethlehem-Dahl
Mechanical Atomizing
Oil-Burning System



THIS oil-burning system atomizes the oil mechanically, using its pressure as it is brought to the burners. This method is efficient, quiet and economical to operate. Positive air control enables the operator to admit the exact amount of air required for perfect combustion. The Bethlehem-Dahl System can be applied to practically any type of boiler of 100 hp. or over, and burns successfully any grade of fuel oil, even the heaviest.

Where fastenings must stand up -

SEVERE combinations of pressure and temperature, encountered in refinery equipment, call for fastenings especially developed to meet the heavy responsibilities involved.

Bethlehem High-Temperature Studs, Bolts and Pressure Screws are made from alloy steels that our metallurgists perfected just for high-pressure, high-temperature applications. Terrific heat holds no terrors for these steels. They combine high physical properties with remarkable freedom from creep. Even under exposure to high temperatures over very long periods, they retain their strength.

Bethlehem Oil-Quenched Nuts are especially recommended for use with fastenings for high temperatures. These nuts are hot-forged from high-carbon steel, then heat-treated. They are highly resistant to the distortion, "freezing," and galling so common at high temperatures.

A Bethlehem metallurgist will gladly study your high-temperature bolting problem and make recommendations.

BETHLEHEM BOLTS *and* STUDS *for high temperatures*

Tin Plate
for Oil Containers

TODAY a considerable volume of motor oil is being marketed in quart containers, sealed at the refinery.

Bethlehem Open-Hearth Coke Tin Plate is ideal for these containers. It has superior stamping qualities and bright, clean surface; it is uniform to gauge and well coated with bright, new tin.

BETHLEHEM
open-hearth coke
TIN PLATE

District Offices: Atlanta, Baltimore, Boston, Bridgeport, Buffalo, Chicago, Cincinnati, Cleveland, Dallas, Detroit, Houston, Indianapolis, Milwaukee, New York, Philadelphia, Pittsburgh, St. Louis, St. Paul, Washington, Wilkes-Barre, York. *Pacific Coast Distributor:* Pacific Coast Steel Corporation, San Francisco, Seattle, Los Angeles, Portland, Honolulu. *Export Distributor:* Bethlehem Steel Export Corp., New York.

Worth in the Oil Industry

MAKING THE PLATE TO FIT THE PURPOSE

Not so many years ago, steel plates were steel plates. One grade was expected to serve a great variety of purposes.

But that was before modern oil-refining methods came along, with soaring temperatures, wide temperature variations, unheard-of pressures.

To meet these conditions and others equally severe, new grades of steel plate had to be developed and many a difficult production problem whipped. Bethlehem has had an important share in this pioneering work, has supplied quality steel plates in large tonnages to oil companies and to manufacturers of oil-refinery equipment, and is doing so today.

If you have a problem calling for steel plate with unusual properties, perhaps for an entirely new composition, put it up to Bethlehem.

Flanged and Dished Heads

Not many flanging shops are next door to a plate mill. And we know of only one that is within a stone's throw not only of plate mills but open-hearths and blast furnaces; and that one is the Bethlehem Flanging Shop. One result: Every process, every single step, from raw material to completed job, is under one control, one responsibility. Another result: When you want Flanged or Dished Heads made from some special steel in a hurry, you get them in a hurry.

WAX PLANT EQUIPMENT

Filter Presses, Wax Distillate Chilling Machines, Wax Moulding Presses, Scale Wax Cooling Drums, Paraffin Wax Sweater Plants, Wax Testing Presses.

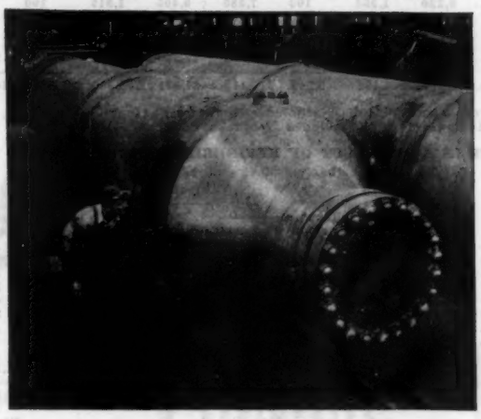
Complete Wax Plants designed and built.

Bethlehem Line Pipe

Bethlehem Pipe has the strong, uniform sections, with smoothly finished ends, and the flexibility and easy-welding qualities that are essential in pipe for line service.

In pipe-line work, in any other application, you can depend on Bethlehem Pipe for long, trouble-free service.

Not a Joint Not a Seam



. . . forged from a Single Steel Ingot

You approach the absolute in safety when you install a Bethlehem Forged Seamless Reaction Chamber.

The strength of a seamless forged reaction chamber is the strength of a single, homogeneous, thoroughly-worked piece of steel. There's no finer steel product made than that achieved by punching the center out of an ingot and then forging it to shape.

Bethlehem has the facilities to make seamless reaction chambers in a wide range of diameters, thicknesses and lengths. Let our engineers cooperate with you in adapting this completely reliable type of vessel to your requirements.

Other Bethlehem Products used *in the* Oil Industry

ALLOY STEELS . . . . . For all purposes.

CORROSION-RESISTING STEELS
Bethadur and Bethalon, covering virtually every requirement.

FORGINGS Carbon and alloy steel; hammered and hydraulically pressed; drop and upsetter.

SHEETS All kinds of sheets: Black and galvanized, flat and corrugated. Sheets of Beth-Cu-Loy (copper-bearing steel) for use wherever rust-resistance is important.

WIRE Plain and galvanized; Bethanized wire (special zinc-coated).

CARBON STEEL BARS
STRUCTURAL SHAPES
BOILER TUBES

NUMBER OF WELLS COMPLETED IN THE UNITED STATES*

	October, 1934	September, 1934	October, 1933	Jan.-Oct., 1934	Jan.-Oct., 1933
Oil	1,234	1,047	1,037	10,481	6,180
Gas	171	134	92	1,108	734
Dry	480	368	280	3,543	2,752
Total	1,885	1,549	1,409	15,132	9,666

*From The Oil and Gas Journal and California office of the American Petroleum Institute.

STOCKS OF CRUDE PETROLEUM BY STATES AND BY LOCATION

(Thousands of barrels of 42 gallons)

	October 31, 1934 — Tank farm and pipe line: Refinery	Tank farm and pipe line	Lease	Total	September 30, 1934 — Tank farm and pipe line: Refinery	Tank farm and pipe line	Lease	Total
Arkansas	528	2,817	300	3,645	514	2,999	310	3,823
California	9,720	26,895	1,594	37,209	9,196	25,805	1,671	36,672
Colorado	286	102	20	408	269	90	20	379
Georgia*	455	.....	.....	455	584	.....	.....	584
Illinois	1,262	10,739	105	12,136	1,249	10,657	110	12,016
Indiana	1,143	1,870	8	3,021	1,163	1,744	8	2,915
Kansas	2,032	11,792	405	14,229	1,734	12,064	410	14,198
Kentucky†	524	398	40	962	507	455	40	1,002
Louisiana‡	4,324	7,174	420	11,917	4,023	7,685	330	12,038
Maryland	1,126	.....	.....	1,126	1,351	.....	.....	1,351
Massachusetts§	850	.....	.....	850	1,137	.....	.....	1,137
Michigan	177	634	95	906	160	615	85	860
Missouri¶	176	3,345	.....	3,521	184	3,553	.....	3,736
Montana	281	627	75	983	270	589	75	934
New Jersey	5,661	593	.....	6,164	5,343	511	.....	5,854
New Mexico	7	345	190	542	8	346	200	554
New York	1,047	142	17	1,206	1,144	133	17	1,293
Ohio	1,128	7,323	80	8,431	1,161	7,206	80	8,447
Oklahoma	3,885	80,542	1,660	86,087	3,872	82,391	1,680	87,943
Pennsylvania	5,330	1,955	100	7,385	5,405	1,915	100	7,420
Texas	12,706	100,214	2,920	115,840	12,796	100,527	3,000	116,323
Utah	284	.....	.....	284	290	.....	.....	290
West Virginia	79	1,869	130	2,078	55	1,857	130	2,042
Wyoming‖	12,663	13,977	390	27,030	12,566	14,160	400	27,126
Total United States	65,674	272,192	8,549	346,415	64,971	275,300	8,666	348,937

*Includes South Carolina and Virginia. †Includes Tennessee. ‡Includes Alabama. §Includes Rhode Island. ¶Includes Iowa. ‖Includes Nebraska and South Dakota.

RUNS TO STILLS AND OUTPUT OF REFINERIES, OCTOBER, 1934

(Thousands of barrels of 42 gallons)

INPUT—	Crude run: Domestic	Crude run: Foreign	Crude run: Total	Unfinished rerun (net): Crude gasoline	Unfinished rerun (net): Other	Natural gasoline
East Coast	12,318	2,336	14,654	29	—207	162
Appalachian	3,060	....	3,060	28	322	26
Ind., Ill., Ky., etc.	19,533	....	19,533	180	—357	309
Okla., Kans., Mo.	7,679	....	7,679	6	157	585
Texas Inland	6,476	....	6,476	—113	—89	404
Texas Gulf	14,022	59	14,081	—4	467	333
Louisiana Gulf	3,215	89	3,304	34	—72	28
Ark. and La. Inland	1,525	....	1,525	1	2	58
Rocky Mountain	1,460	....	1,460	20	—67	74
California	12,616	....	12,616	73	—172	*1,151
Total	72,904	2,484	75,388	254	—20	3,133

OUTPUT—	Gasoline	Kerosene	Gas oil and distillate fuels	Residual fuel oils	Lubricants	Wax (thousands of lbs.)
East Coast	5,998	935	1,006	3,678	636	17,920
Appalachian	1,614	260	231	449	428	7,560
Ind., Ill., Ky., etc.	6,213	376	1,047	1,374	193	2,800
Okla., Kans., Mo.	4,712	512	542	1,576	240	3,360
Texas Inland	3,231	409	581	1,929	32	280
Texas Gulf	6,681	1,264	1,559	3,616	413	4,480
Louisiana Gulf	1,125	468	504	876	34	1,400
Ark. and La. Inland	773	81	90	441	17	....
Rocky Mountain	776	52	82	310	15	1,680
California	5,051	465	1,586	5,607	145	....
Total	†36,174	4,822	7,828	19,856	2,145	39,480

OUTPUT—	Coke (tons)	Asphalt (tons)	Road oils	Still gas	Miscellaneous	Shortage
East Coast	11,400	133,800	45	773	41	67
Appalachian	2,400	13,500	....	199	29	118
Ind., Ill., Ky., etc.	54,400	56,200	35	819	9	41
Okla., Kans., Mo.	15,200	4,500	91	388	19	237
Texas Inland	3,000	....	42	123	7	317
Texas Gulf	35,600	13,500	12	912	15	137
Louisiana Gulf	200	12,900	1	121	....	84
Ark. and La. Inland	200	9,500	21	37	4	69
Rocky Mountain	6,800	5,500	84	76	—2	24
California	.....	24,000	240	339	‡18	80
Total	129,200	267,300	572	3,787	149	1,174

*Includes 95,000 bbls. run through pipe lines. †Includes 414,000 bbls. special naphthas. ‡Includes 5,000 bbls. liquefied petroleum gas made from natural gasoline.

CRACKED OPERATIONS

Fresh cracking stock charged to stills—crude, 4,464,000 bbls.; other oils, 36,806,000 bbls.; gasoline produced by cracking, 16,014,000 bbls.; fuel oil produced by cracking, 14,971,000 bbls.

GASOLINE PRODUCTION BY THE VARIOUS METHODS, OCTOBER, 1934

(Thousands of barrels of 42 gallons)

	Straightrun: Total	Straightrun: Per cent (*)	Straightrun: Per cent (†)	Cracked: Total	Cracked: Per cent (*)	Cracked: Per cent (†)	Nat. gas.: Total	Nat. gas.: Per cent†	Gasoline: Total	Gasoline: Per cent*
East Coast	2,528	17.2	42.1	3,308	22.6	55.2	162	2.7	5,998	39.8
Appalachian	898	26.4	55.1	730	25.2	48.2	26	1.6	1,614	51.9
Ind., Ill., etc.	2,566	24.4	41.3	3,338	31.7	53.7	309	5.0	6,213	56.1
Okla., Kans., Mo.	2,199	27.5	44.7	2,015	26.2	42.8	588	12.5	4,712	53.7
Texas Inland	2,092	32.2	64.8	734	11.4	22.7	404	12.5	3,231	42.7
Texas Gulf	2,973	21.1	44.5	3,375	24.8	50.5	333	5.0	6,681	46.1
Louisiana Gulf	668	20.3	59.4	429	13.0	38.1	28	2.5	1,125	32.2
Ark. and La. Inland	382	23.7	46.8	353	23.2	45.7	58	7.5	773	46.9
Rocky Mountain	388	25.2	47.4	334	22.9	43.1	74	9.8	776	48.1
California	2,557	20.3	50.6	1,348	10.7	26.7	1,146	22.7	5,051	31.0
Total	17,032	22.6	47.1	16,014	21.2	44.3	3,128	8.6	36,174	48.8

*Per cent of crude run. †Per cent of total gasoline output.

RECEIPTS OF FOREIGN CRUDE PETROLEUM

(Thousands of barrels of 42 gallons)

	Oct., 1934	Sept., 1934	Oct., 1933
Atlantic Seaboard:			
Venezuela	1,951	1,965	1,516
Colombia	....	....	185
Mexico	186	392	100
Ecuador	....	....	80
Gulf Coast:			
Mexico	54	133	45
Venezuela	175	....	....
Total	2,366	2,490	1,926

RECORD OF WELLS FOR IMPORTANT FLUSH FIELDS, OCTOBER, 1934*

	Completions: Oil	Gas	Dry	Total initial production (bbls.)	Average initial production (bbls.)	Drilling October 31
Texas	655	35	235	639,600	1,050	971
East Texas	349	2	16	593,300	1,700	139
Gulf Coast	67	15	37	33,900	505	115
Conroe	5	...	1	3,000	600	2
Greta	3	4	1	2,900	365	3
West Texas	62	...	21	25,900	420	160
California	54	...	27	41,500	770	210
Kettleman Hills	3	...	...	11,700	3,900	27
Long Beach	10	...	1	2,500	250	19
Huntington Beach	1	...	2	2,100	2,100	7
Oklahoma	89	8	43	54,300	615	435
Oklahoma City	2	...	1	2,400	1,200	24
Pottawatomie and Seminole Counties	20	...	5	19,900	995	68
Louisiana	39	10	27	27,200	700	164
Gulf Coast	31	...	11	26,800	865	85
Rest of State	8	10	16	400	50	79
Other states	397	118	148	68,900	175	1,099
Total United States	1,234	171	480	882,000	715	2,879

*From The Oil and Gas Journal and California office of the American Petroleum Institute.

STOCKS HELD BY REFINING COMPANIES, OCTOBER 31, 1934

(Thousands of barrels of 42 gallons)

	Gasoline: At refineries	Gasoline: Bulk and pipe lines	Gasoline: Total	Kerosene	Gas oil and distillate fuels	Residual fuel oils
East Coast	4,075	8,672	12,748	2,125	6,850	8,180
Appalachian	827	1,368	2,195	178	335	962
Ind., Ill., Ky., etc.	2,943	3,875	6,818	711	3,194	3,316
Okla., Kans., Mo.	3,565	1,385	3,950	670	1,264	2,351
Texas Inland	1,353	78	1,430	200	392	1,587
Texas Gulf	4,152	782	4,934	1,913	4,817	6,686
Louisiana Gulf	750	450	1,200	119	2,091	2,846
Ark. and La. Inland	230	44	274	16	159	867
Rocky Mountain	491	.....	491	125	179	346
California	8,750	3,297	11,047	1,328	5,494	67,133
Total	26,136	18,951	45,087	7,385	24,772	94,304

	Wax (thousands of lbs.): Lubricants	Crude scale	Refined	Total	Coke (tons)
East Coast	2,128	18,436	34,486	52,922	28,400
Appalachian	986	15,713	2,740	18,453	8,700
Ind., Ill., Ky., etc.	529	13,808	2,365	16,173	43,900
Okla., Kans., Mo.	472	3,560	616	4,176	42,200
Texas Inland	96	.....	198	198	58,600
Texas Gulf	1,662	2,757	17,413	20,170	104,000
Louisiana Gulf	92	605	1,226	1,831	500
Ark. and La. Inland	18	.....	.....	.....	100
Rocky Mountain	73	7,677	1,499	9,176	81,700
California	883	.....	.....	.....	95,000
Total	6,939	62,566	60,543	123,099	464,100

	Asphalt (tons)	Unfinished oils: Road oil	Miscellaneous	Crude gasoline	Other	Natural gasoline
East Coast	93,600	47	32	942	3,080	244
Appalachian	6,500	13	42	374	1,972	3
Ind., Ill., Ky.	67,000	97	32	729	5,935	61
Oklahoma, Kans., Mo.	9,400	114	24	441	5,003	86
Texas Inland	.....	25	11	224	1,128	11
Texas Gulf	11,800	37	29	1,194	10,230	194
Louisiana Gulf	21,000	12	...	168	1,146	....
Ark. and La. Inland	37,600	9	1	48	241	3
Rocky Mountain	5,700	81	6	101	1,879	18
California	39,000	161	50	767	4,811	2,473
Total	291,900	596	228	4,888	40,425	3,093

Grand total stocks refined products, 228,990,000 bbls.

SHIPMENTS FROM CALIFORNIA TO EASTERN PORTS IN THE UNITED STATES*

(Thousands of barrels of 42 gallons)

	October, 1934	September, 1934	October, 1933	Jan.-Oct., 1934	Jan.-Oct., 1933
Gasoline	951	875	1,162	7,122	9,898
Natural gasoline	....	....	....	....	81
Kerosene	168	90	81	1,259	1,201
Gas oil and Diesel oil	79	148	92	1,697	1,655
Fuel oil	566	606	1,307	11,973	2,365
Lubricants	3	....	....	56	40
Asphalt	....	....	....	74	1
Miscellaneous	3	3	17	56	174
Total	1,305	1,721	2,659	21,337	15,415

*Compiled by E. T. Knudsen of the San Francisco office of the Bureau of Mines.

SHIPMENTS OF MOTOR FUEL BY PIPE LINES

(Thousands of barrels of 42 gallons)

	October, 1934	September, 1934	October, 1933	Jan.-Oct., 1934	Jan.-Oct., 1933
Motor fuel turned into lines	4,226	4,143	3,440	37,843	31,143
Motor fuel delivered from lines	4,237	4,047	3,356	37,797	31,087
Shortage	16	4	11	96	69
Stocks in line and working tanks end of month	1,265	1,342	1,185	1,265	1,185

OCTOBER CAR REGISTRATIONS

New passenger car registrations during October in all of the United States totaled 140,880 units, according to R. L. Polk & Co. This is 4.12 per cent under September sales of 146,931 but is 3.53 per cent greater than October, 1933, total of 136,075. Passenger car sales in the first 10 months totaled 1,705,570 units against 1,341,025 in the corresponding period last year.

October truck and commercial car registrations amounted to 40,878 units, or 9.81 per cent more than September total of 37,225, and 45.70 per cent above October, 1933, total of 28,058. Commercial car sales for the first 10 months this year numbered 351,127 units against 211,598 in the first 10 months of 1933.

CANADIAN OIL IMPORTS

OTTAWA, Canada, Dec. 17.—Official figures of the federal department of trade and commerce show that in September Canada imported petroleum, asphalt and their products having a value of $4,744,308 compared with $4,860,330 in August. The percentage receipts by countries were United States, 84.5; Colombia, 7.9; Peru, 5.8; Venezuela, 1; India, 0.6.

Crude petroleum receipts in September totaled 118,210,821 gallons, supplied as follows: United States, 94,825,560 gallons; Colombia, 13,031,205 gallons; Peru, 7,580,971 gallons, and Venezuela 2,773,085 gallons.

Exports of petroleum and its products from Canada in September were valued at $125,279 against an August valuation of $55,772.

Pure Oil Dealers Have WINTER LUBRICANTS that stay *fluid!*

● To meet the demand of cold-weather motorists for easy gear shifting, easy starting, and safe lubrication in spite of stiffening cold, Pure Oil dealers are supplied with Cold-Proof Tiolene Motor Oil, and Winter Purelube, an Extreme Pressure lubricant for transmissions, differentials, and free-wheeling units. These winter lubricants remain fluid enough to give instant protection to cold gears or bearings, yet have the stamina to safely lubricate under operating temperatures.

Throughout 32 states, dealers and distributors who display the PURE seal sign are profiting by the ready-made demand for Pure Oil brands. As final assurance of quick starting and thrifty mileage, their customers are asking for Purol-Pep (or its southern twin, Woco-Pep)—modern motor fuels that are brimfull of "get-away" and "go".

Are you familiar with the Pure Oil proposition? If not, it will pay you to write nearest sales office for details.

PURE

REFINERIES:
Marcus Hook, Pennsylvania
Cabin Creek Jct., West Virginia
Heath, Ohio
Muskogee, Oklahoma
Smith's Bluff, Texas
Toledo, Ohio
Midland, Michigan

SALES OFFICES:
Chicago, Illinois
New York, New York
Philadelphia, Pennsylvania
Pittsburgh, Pennsylvania
Trenton, New Jersey
Columbus, Ohio
Norfolk, Virginia
Atlanta, Georgia
Minneapolis, Minnesota
Des Moines, Iowa
Tulsa, Oklahoma
Beaumont, Texas

Purol Pep — Tiolene

The Profit Twins of Pure Oil Dealers

PRODUCERS, REFINERS, MARKETERS OF A COMPLETE LINE OF PETROLEUM PRODUCTS

THE PURE OIL COMPANY ~ U. S. A.

Summary of Operations in All Fields for November, 1934

SUMMARY OF WELLS COMPLETED

	Comp.	Prod.	Dry	Gas
Penna. Grade fields	239	968	29	27
Central Ohio	85	311	23	48
Lima	14	107	1	4
Indiana	24	165	9	8
Illinois	2	90	1	0
Kentucky	57	2,116	22	1
Michigan	30	6,165	12	5
Kansas	69	32,746	17	5
Oklahoma	126	53,849	27	8
North Central Texas	176	6,502	72	5
West Texas	51	43,973	11	1
Texas Panhandle	38	10,409	0	4
East Central Texas	25	792	10	0
East Texas	235	11,288	7	0
Gulf Coast, Texas	81	33,015	22	6
Southwest Texas	126	15,861	67	6
North Louisiana	33	290	13	11
Gulf Coast, La.	31	15,515	10	0
Arkansas	6	925	3	0
Montana	14	618	4	2
Wyoming	11	928	1	1
Colorado	2	2,208	1	0
New Mexico	16	25,041	4	3
Total November	1,491	263,883	366	155
Total October	1,804	265,994	453	171
Difference	313	2,111	87	16

RIGS AND WELLS DRILLING

	Rigs	Drlg.	Ttl.
Penn. Grade fields	66	210	276
Central Ohio	32	142	174
Lima	2	34	36
Indiana	1	55	56
Illinois	0	16	16
Kentucky	1	25	26
Michigan	98	158	256
Kansas	36	176	212
North Central Texas	62	202	264
Oklahoma	100	444	544
West Texas	40	157	197
Texas Panhandle	44	113	157
East Central Texas	24	46	70
East Texas	98	161	259
East Texas gas area	3	14	17
Gulf Coast, Texas	31	91	122
Southwest Texas	45	123	168
North Louisiana	31	76	107
Gulf Coast, La.	28	86	114
Arkansas	14	38	52
Mississippi	1	14	15
Alabama	1	2	3
Montana	8	44	52
Wyoming	10	73	83
Colorado	4	28	32
New Mexico	11	78	89
Utah	1	14	15
Total November	792	2,620	3,412
Total October	761	2,769	3,530
Difference	31	49	18

Oklahoma Fields

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Carter	4	202	2	0
Cleveland	1	0	1	0
Creek	12	1,258	3	1
Garfield	1	0	1	0
Grant	1	0	1	1
Hughes	7	632	0	0
Jefferson	1	25	0	0
Lincoln	4	657	2	0
Logan	3	645	0	0
McIntosh	2	0	1	1
Marshall	2	10	1	0
Muskogee	2	0	1	1
Noble	7	3,559	0	0
Okfuskee	3	0	1	1
Oklahoma	5	3,679	0	0
Okmulgee	4	80	1	0
Osage	28	17,241	5	1
Pawnee	1	150	0	0
Pontotoc	15	12,349	4	1
Pottawatomie	14	5,270	1	0
Seminole	7	3,072	1	0
Stephens	1	0	1	0
Tulsa	3	20	0	1
Total November	126	53,849	27	8
Total October	140	54,781	43	3
Difference	14	932	16	0

Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Alfalfa	0	1	1
Atoka	0	11	11
Beckham	1	2	3
Blaine	0	1	1
Bryan	0	1	1
Caddo	0	6	6
Carter	2	15	17
Choctaw	0	1	1
Cleveland	0	2	2
Coal	0	2	2
Comanche	0	8	8
Creek	5	41	46
Ellis	0	1	1
Garfield	0	2	2
Garvin	0	1	1
Grady	0	4	4
Grant	1	0	1
Greer	0	1	1
Harper	0	1	1
Hughes	2	8	10
Jackson	0	6	6
Jefferson	2	10	12
Johnston	0	1	1
Kay	1	3	4
Kingfisher	0	1	1
Leflore	0	1	1
Kiowa	0	2	2
Leflore	1	1	1
Lincoln	5	15	20
Logan	3	12	15
McIntosh	0	4	4
Marshall	0	6	6
Murray	0	3	3
Muskogee	0	3	3
Noble	2	8	10
Okfuskee	0	8	8
Oklahoma	17	29	46
Okmulgee	3	26	29
Osage	23	43	66
Pawnee	1	6	7
Payne	0	3	3
Pittsburg	0	5	5
Pontotoc	13	55	67
Pottawatomie	10	36	46
Pushmataha	0	1	1
Seminole	8	32	40
Stephens	0	11	11
Texas	0	1	1
Tulsa	0	3	3
Washita	1	1	2
Total November	100	444	544
Total October	84	435	519
Difference	16	9	25

Kansas Fields

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Reno	10	13,315	2	0
Sumner	1	0	1	0
Cowley	5	25	2	2
Butler	8	278	2	1
Sedgwick	9	2,985	1	0
Rice	11	8,144	3	0
McPherson	5	2,495	0	0
Ellsworth	4	629	2	1
Russell	13	4,457	3	0
Greer	1	0	1	0
Elk	1	260	0	0
Ellis	1	128	0	0
Rush	1	0	0	1
Total November	69	32,746	17	5
Total October	81	22,441	24	6
Difference	12	10,305	7	1

Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Clay	0	2	2
Rooks	0	1	1
Osborne	0	1	1
Russell	2	26	28
Trego	0	1	1
Ellis	0	1	1
Saline	0	1	1
Dickinson	0	1	1
Ellsworth	2	6	8
Barton	1	6	7
Rush	2	5	7
McPherson	4	26	30
Rice	7	21	28
Ness	0	1	1
Scott	0	1	1
Stafford	0	3	3
Harvey	0	9	9
Reno	8	22	30
Butler	3	11	14
Sedgwick	5	14	19
Greenwood	0	2	2
Kingman	0	2	2
Sumner	2	3	5
Barber	0	1	1
Elk	0	5	5
Cowley	0	4	4
Total November	36	176	212
Total October	38	173	211
Difference	2	3	1

East Central Texas Fields

Summary of Wells Completed

County—	Comp.	Prod.	Abd.	Gas
Anderson	2	160	0	0
Cherokee	2	0	2	0
Fannin	1	0	1	0
Freestone	2	0	2	0
Gregg	119	7,022	2	0
Hopkins	1	0	1	0
Navarro	2	0	2	0
Rains	1	0	1	0
Rusk	97	3,498	0	0
Smith	15	633	2	0
Upshur	16	768	2	0
Van Zandt	1	0	1	0
Wood	1	0	1	0
Total November	260	12,081	17	0
Total October	395	19,756	35	3
Difference	135	7,675	18	3

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drg.	Ttl.
Anderson	4	0	6	10
Bowie	1	0	0	1
Cherokee	2	4	0	6
Ellis	0	1	0	1
Freestone	1	1	0	2
Gregg	56	0	67	123
Henderson	0	2	0	2
Hopkins	0	1	0	1
Hunt	2	2	2	6
Kaufman	0	2	0	2
Leon	0	0	1	1
Limestone	3	1	2	6
Morris	0	1	1	2
Nacogdoches	1	0	1	2
Navarro	0	4	0	4
Rains	0	1	0	1
Red River	2	0	0	2
Rusk	34	4	69	107
Smith	0	3	0	3
Upshur	5	15	1	20
Van Zandt	10	5	12	27
Total November	132	45	162	329
Total October	113	30	160	303
Difference	9	15	2	26

North Central Texas Fields

Summary of Wells Completed

County—	Comp.	Prod.	Abd.	Gas
Archer	71	4,489	21	0
Brown	4	0	4	0
Coleman	4	33	2	0
Cooke	2	115	1	0
Eastland	2	5	0	1
Foard	1	7	0	0
Jack	7	2	6	0
Montague	8	345	3	0
Palo Pinto	5	45	1	1
Shackelford	10	261	3	0
Stephens	2	0	1	1
Throckmorton	1	17	0	0
Wichita	25	403	7	1
Wilbarger	10	340	5	0
Young	24	439	18	1
Total November	176	6,502	72	5
Total October	167	6,199	89	2
Difference	9	303	17	3

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drg.	Ttl.
Archer	16	5	43	64
Baylor	0	2	1	3
Brown	2	2	7	11
Callahan	1	5	5	11
Clay	2	0	5	7
Coleman	0	3	4	7
Comanche	0	2	1	3
Cooke	3	3	5	11
Denton	0	1	0	1
Eastland	1	1	9	11
Erath	0	1	1	2
Foard	0	0	2	2
Haskell	0	1	0	1
Hamilton	0	0	1	1
Jack	5	3	5	13
Knox	0	1	0	1
Lampasas	0	1	0	1
Montague	2	0	4	6
Palo Pinto	1	1	1	3
Parker	1	0	1	2
Shackelford	7	4	14	25
Stephens	0	2	0	2
Stonewall	0	0	1	1
Tarrant	0	1	0	1
Throckmorton	0	5	2	7
Wichita	5	2	17	24
Wilbarger	3	1	4	8
Wise	3	0	0	3
Young	10	2	18	30
Total November	62	51	151	264
Total October	56	52	175	283
Difference	6	1	24	19

Texas Panhandle

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Carson	3	518	0	3
Gray	17	5,208	0	0
Hutchinson	2	273	0	0
Moore	1	0	0	1
Wheeler	15	4,410	0	1
Total Nov.	38	10,409	0	4
Total Oct.	42	11,880	8	4
Difference	4	1,471	8	0

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drg.	Ttl.
Carson	3	0	3	6
Childress	1	0	1	2
Collingsworth	0	0	1	1
Deaf Smith	0	1	0	1
Dallam	0	1	0	1
Gray	23	2	47	72
Hutchinson	10	1	15	26
Moore	0	0	6	6
Potter	0	0	1	1
Randall	0	0	1	1
Roberts	0	1	1	2
Wheeler	7	11	21	39
Total Nov.	44	17	97	158
Total Oct.	31	16	92	139
Difference	13	1	5	19

West Texas Fields

Summary of Wells Completed

County—	Comp.	Prod.	Abd.	Gas
Crane	1	125	0	0
Ector	4	1,221	1	0
Fisher	3	4,160	1	0
Glasscock	2	25	1	0
Howard	6	424	0	0
Jones	5	143	2	0
Pecos	8	32,113	2	0
Reagan	1	965	0	0
Runnels	4	480	1	0
Sterling	1	0	1	0
Upton	4	1,406	0	0
Ward	8	2,510	2	0
Winkler	4	401	0	1
Total November	51	43,973	11	1
Total October	82	35,901	21	0
Difference	31	18,072	10	1

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Drg.	Ttl.
Andrews	1	1	5	7
Brewster	0	2	1	3
Cochran	2	0	0	2
Coke	0	1	0	1
Crane	0	2	0	2
Culberson	0	3	1	4
Dawson	0	1	0	1
Ector	2	5	10	17
El Paso	0	1	0	1
Fisher	2	0	7	10
Glasscock	1	2	5	8
Howard	6	6	15	27
Jeff Davis	0	1	0	1
Jones	1	3	6	10
Loving	1	2	1	4
Mitchell	0	2	1	3
Pecos	2	6	5	13
Presidio	0	1	0	1
Reagan	0	1	1	2
Reeves	1	0	1	2
Runnels	2	4	6	12
Schleicher	1	1	1	3
Scurry	0	0	1	1
Sterling	1	0	0	1
Stonewall	0	0	1	1
Sutton	0	0	1	1
Taylor	0	0	2	2
Terrell	0	1	0	1
Upton	1	2	1	4
Ward	9	7	18	34
Winkler	6	4	8	18
Total November	40	59	98	197
Total October	30	36	124	190
Difference	10	23	26	7

Southwest Texas Fields

Summary of Field Operations

Field—	Comp.	Prod.	Abd.	Gas	Rigs	Drg.	Ttl.
Barbacoas	1	0	1	0	0	0	0
Blas Uribe	0	0	0	0	1	0	1
Byersville	9	47	5	0	0	0	0
Caesar	1	114	0	0	1	1	2
West Cole	4	1,600	1	1	1	8	9
North Dale	2	0	2	0	1	0	1
Darst Creek	1	6	0	0	0	0	0
Dunlap	0	0	0	0	0	1	1
Eagle Hill	1	0	1	0	0	0	0
Escobas	1	10	0	0	0	1	1
Sam Fordyce	15	7,615	6	1	11	5	16
Gov. Wells	28	4,703	5	2	1	12	13
Henne-Winch.	1	60	0	0	0	0	0
Hoch	0	0	0	0	0	1	1
Hoffman	0	0	0	0	0	1	1
Jacobs	5	158	2	0	1	6	7
Jeffries-Lambeth	0	0	0	0	0	1	1
Jennings	2	15	0	0	0	0	0
Kimbro	2	4	1	0	0	0	0
Los Olmos	0	0	0	0	0	1	1
Lucas	1	0	1	0	0	2	2
Martinez	0	0	0	0	0	1	1
Normana	0	0	0	0	0	1	1
North Pettus	4	200	2	0	0	1	1
Piedras Pintas	1	0	1	0	0	0	0
Sinton	0	0	0	0	1	2	3
West Tuleta	6	1,274	0	0	3	3	6
Von Ormy	1	0	1	0	0	0	0
Miscellaneous	39	50	36	2	24	74	98
Total Nov.	126	15,861	67	6	45	123	168
Total Oct.	118	18,236	44	11	47	157	204
Difference	8	2,375	23	5	2	34	36

Gulf Coast Fields

TEXAS

Summary of Field Operations

Field—	Comp.	Prod.	Abd.	Gas	Rigs	Drlg.	Ttl.
Arriola	1	0	0	0	0	1	1
Barbers Hill	6	6,997	1	0	3	8	11
Batson	5	240	0	0	0	0	0
Big Creek	1	0	1	0	0	0	0
Blue Ridge	1	1,200	0	0	0	0	0
Boling	1	500	0	0	0	3	3
Buckeye	2	0	2	0	0	1	1
Clay Creek	2	530	0	0	0	0	0
Cleveland	0	0	0	0	0	1	1
Coleto Creek	1	175	0	0	3	1	4
Conroe	4	2,171	1	0	0	2	2
Damon Mound	0	0	0	0	0	3	3
Danbury	0	0	0	0	0	2	2
Esperson	0	0	0	0	0	3	3
Fannett	0	0	0	0	0	1	1
Goose Creek	0	0	0	0	0	1	1
Greta	3	1,243	0	0	2	4	6
Hankamer	0	0	0	0	0	1	1
High Island	2	550	0	0	1	2	3
Hull	2	105	1	0	0	2	2
Humble	0	0	0	0	0	1	1
Kittrell	1	0	1	0	0	1	1
Livingston	1	124	0	0	1	1	2
Louise	1	65	0	0	0	1	1
Manvel	5	7,028	0	0	0	5	5
McFaddin-O'Conner	1	0	1	0	0	1	1
Markham	1	0	1	0	0	0	0
Mykawa	1	250	0	0	0	3	3
Orchard	0	0	0	0	0	1	1
Pierce Junc.	3	310	1	0	0	3	3
Pledger	2	0	0	2	0	0	0
Port Neches	2	0	2	0	1	1	2
Raccoon Bend	5	4,512	0	1	1	1	2
Refugio	2	425	0	0	2	3	5
San Felipe	1	0	1	0	0	0	0
Saratoga	1	35	0	0	0	2	2
Sour Lake	2	60	0	0	0	3	3
Stratton Rdg.	1	0	1	0	0	0	0
Spindletop	0	0	0	0	0	0	0
Thompson	3	2,658	0	0	1	1	2
Tomball	8	2,269	0	2	1	2	3
Vanderbilt	0	0	0	0	3	0	3
Miscellaneous	11	768	3	1	13	26	39
Total Nov.	81	33,015	22	6	31	91	122
Total Oct.	119	32,880	37	15	45	115	160
Difference	38	865	15	9	14	24	38

LOUISIANA

Summary of Field Operations

Field—	Comp.	Prod.	Abd.	Gas	Rigs	Drlg.	Ttl.
Bay Junop	1	0	1	0	0	0	0
Bay St. Elaine	0	0	0	0	0	1	1
Black Bayou	1	0	1	0	0	2	2
Bosco	4	2,660	0	0	4	10	14
Cameron Meadows	0	0	0	0	1	2	3
Dog Lake	0	0	0	0	0	1	1

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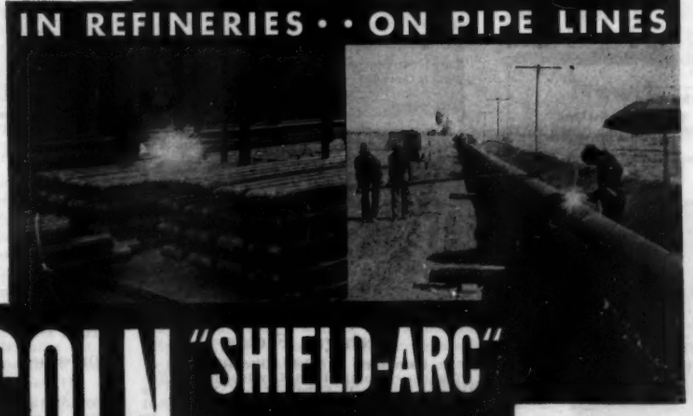

LINCOLN "SHIELD-ARC" WELDERS

Edgerly	1	2,000	0	0	0	0	0
Four Island	1	2,000	0	0	0	0	0
Gillis Area	1	420	0	0	0	0	0
Gueydan	0	0	0	0	0	1	1
Hackberry	2	0	2	0	2	7	9
Iowa	1	1,530	0	0	2	7	9
Jennings	3	230	0	0	0	2	2
Lake Barre	1	1,704	0	0	2	1	3
Lake Hermitage	0	0	0	0	0	1	1
Lake Washington	1	0	0	0	0	2	2
Leesville	3	2,479	0	0	3	9	12
Lockport	2	100	1	0	0	4	4
New Iberia	1	0	1	0	0	2	2
Port Barre	1	1,192	0	0	1	1	2
Roanoke	1	696	0	0	0	5	5
Sorrento	0	0	0	0	0	1	1
Starke	1	0	1	0	0	0	0
Sulphur	1	45	0	0	0	5	5
Sweet Lake	0	0	0	0	1	0	1
Vinton	4	460	2	0	0	2	2
White Castle	0	0	0	0	0	1	1
Miscellaneous	1	0	1	0	12	19	31
Total Nov...	31	15,515	10	0	28	86	114
Total Oct...	42	26,821	11	0	27	85	113
Difference..	11	11,306	1	0	1	1	2

Rocky Mountain Area

NEW MEXICO

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Dig.	Ttl.
Chaves	0	0	0	0	1	3	4
DeBaca	1	0	1	0	0	0	0
Eddy	4	18	2	1	2	5	7
Lea	10	25,023	0	2	5	32	37
McKinley	0	0	0	0	0	6	6
San Juan	1	0	1	0	1	12	13
San Miguel	0	0	0	0	1	6	7
Santa Fe	0	0	0	0	0	3	3
Valencia	0	0	0	0	0	3	3
Miscellaneous	0	0	0	0	1	9	9
Ttl. Nov.	16	25,041	4	3	11	78	89
Ttl. Oct.	18	26,790	3	0	12	67	79
Difference.	2	1,749	1	3	1	9	10

COLORADO

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dig.	Ttl.
Adams	0	0	0	0	1	1	2
Grand	0	0	0	0	0	2	2
Huerfano	0	0	0	0	0	3	3
Jackson	0	0	0	0	0	2	2
Larimer	0	0	0	0	0	3	3
Moffat	1	2,208	0	0	2	1	3
Routt	1	0	1	0	0	1	1
Weld	0	0	0	0	0	1	1
Miscellaneous	0	0	0	0	1	14	15
Ttl. Nov.	2	2,208	1	0	4	28	32
Ttl. Oct.	4	0	3	1	4	32	36
Difference.	2	2,208	2	1	0	4	4

WYOMING

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dig.	Ttl.
Albany	0	0	0	0	0	2	2
Big Horn	1	500	0	0	3	7	10
Carbon	0	0	0	0	1	7	8
Converse	0	0	0	0	1	6	7
Crook	0	0	0	0	0	7	7
Fremont	0	0	0	0	0	6	6
Lincoln	0	0	0	0	0	4	4
Natrona	3	36	0	0	0	4	4
Niobrara	0	0	0	0	0	3	3
Park	2	300	0	1	1	2	3
Sweetwater	4	102	0	0	0	3	3
Sublet	0	0	0	0	0	4	4
Uinta	0	0	0	0	0	6	6
Washakie	0	0	0	0	0	2	2
Weston	1	0	1	0	0	4	4
Miscellaneous	0	0	0	0	0	4	4
Ttl. Nov.	11	938	1	1	10	73	83
Ttl. Oct.	7	3,315	3	1	9	81	90
Difference.	4	2,377	2	0	1	8	7

MONTANA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dig.	Ttl.
Carbon	0	0	0	0	0	3	3
Fergus	0	0	0	0	0	3	3
Glacier	10	588	3	1	5	14	19
Liberty	0	0	0	0	0	4	4
Petroleum	0	0	1	0	0	1	1
Phillips	1	0	0	1	0	0	0
Teton	1	0	1	0	0	0	0
Toole	1	30	0	0	2	10	12
Miscellaneous	0	0	0	0	1	9	10
Ttl. Nov.	14	618	4	2	8	44	52
Ttl. Oct.	23	1,718	4	4	7	54	61
Difference	9	1,100	0	2	1	10	9

UTAH

	Comp.	Prod.	Dry	Gas	Rgs.	Dig.	Ttl.
Total Nov.	0	0	0	0	1	14	15
Total Oct.	0	0	0	0	1	14	15
Difference.	0	0	0	0	0	0	0

Louisiana Fields

NORTH LOUISIANA

Summary of Field Operations

	Comp.	Prod.	Dry	*Gas	Rigs	Drg.	T. l.
Avoyelles	0	0	0	0	0	1	1
Bienville	1	0	1	0	0	2	2
Bossier	8	45	2	2	2	7	9
Caddo	9	100	2	6	11	13	24
Caldwell	1	0	1	0	0	0	0
Catahoula	0	0	0	0	0	1	1
Claiborne	0	0	0	0	1	0	1
De Soto	2	10	1	0	1	14	15
East Carroll	1	0	1	0	0	0	0
Grant	0	0	0	0	0	1	1
La Salle	0	0	0	0	0	1	1
Morehouse	1	0	0	1	0	1	1
Natchitoches	0	0	0	0	0	5	5
Ouachita	1	0	0	1	0	2	2
Rapides	0	0	0	0	1	1	2
Red River	1	0	1	0	1	4	5
Sabine	7	135	3	0	12	20	32
Tensas	0	0	0	0	0	1	1
Union	1	0	0	1	0	1	1
Webster	0	0	0	0	2	0	2
Total Nov...	33	290	13	11	31	76	107
Total Oct. ..	34	372	16	10	31	79	110
Difference .	1	15	3	1	0	3	3

*Gas production, Bossier, 56,000,000; Caddo, 5,750,000; Morehouse, 5,000,000; Ouachita, 1,500,000; Union, 1,500,000. Total, 69,750,000 feet.

Arkansas Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Dig.	Ttl.
Arkansas	0	0	0	0	0	1	1
Columbia	1	0	1	0	0	0	0
Hempstead	0	0	0	0	0	4	4
Lafayette	0	0	0	0	1	5	6
Little River	0	0	0	0	0	2	2
Lonoke	1	0	1	0	0	0	0
Miller	2	40	1	0	4	8	12
Nevada	0	0	0	0	1	1	2
Ouachita	0	0	0	0	0	4	4
Poinsett	0	0	0	0	0	1	1
St. Francis	0	0	0	0	0	1	1
Union	2	885	0	0	7	11	18
Woodruff	0	0	0	0	1	0	1
Total Nov...	6	925	3	0	14	38	52
Total Oct..	9	610	4	0	8	32	40
Difference .	3	315	1	0	6	6	12

Mississippi Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Dig.	Ttl.
Amite	0	0	0	0	0	1	1
Boliver	0	0	0	0	0	1	1
Greene	0	0	0	0	0	1	1
Harrison	0	0	0	0	0	1	1
Hinds	0	0	0	0	0	1	1
Issequena	0	0	0	0	0	1	1
Jones	0	0	0	0	0	1	1
Lauderdale	0	0	0	0	0	1	1
Monroe	0	0	0	0	0	2	2
Scott	0	0	0	0	0	1	1
Simpson	0	0	0	0	0	1	1
Washington	0	0	0	0	0	1	1
Winston	0	0	0	0	0	1	1
Total Nov...	0	0	0	0	0	1	1
Total Oct. ..	1	0	1	0	0	5	11
Difference .	1	0	1	0	0	4	10

East Texas Border Counties

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Cass	0	0	0	0	1	1	2
Harrison	0	0	0	0	0	3	3
Marion	0	0	0	0	0	2	2
Panola	0	0	0	0	2	4	6
Shelby	0	0	0	0	0	4	4
Total Nov...	0	0	0	0	3	14	17
Total Oct. ..	0	0	0	0	2	16	18
Difference .	0	0	0	0	1	2	1

Eastern Fields

Summary of Completed Work

Field—	Comp.	Prod.	Dry	Gas
Bradford	100	175	0	0
Allegany	7	6	0	0
Venango-Clarion	11	11	9	1
Butler-Armstrong	2	2	1	0
S. W. Pennsylvania	12	38	2	4
Southeast Ohio	43	388	11	6
West Virginia	64	348	15	26
Total November	239	968	29	37
Total October	230	660	39	36
Difference	9	308	10	1

Summary of Work Under Way

Field—	Rigs	Drlg.	Ttl.
Bradford	16	61	77
Allegany	2	2	4
Venango-Clarion	0	7	7
Butler-Armstrong	1	4	5
S. W. Pennsylvania	4	15	19
Southeast Ohio	19	33	52
West Virginia	24	88	112
Total November	46	210	276
Total October	63	223	286
Difference	3	13	10

Michigan Fields

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Midland	12	5,600	2	0	13	37	50
Isabella	5	230	2	1	17	34	51
Oceana	0	0	0	0	5	17	22
Gratiot	0	0	0	0	4	4	8
St. Clair	0	0	0	0	0	2	2
Clinton	0	0	0	0	1	0	1
Clare	0	0	0	0	3	0	3
Kent	0	0	0	0	1	2	3
Emmett	0	0	0	0	1	1	2
Cass	0	0	0	0	3	1	4
Montmorency	0	0	0	0	3	0	3
Sanilac	0	0	0	0	3	0	3
Newyago	0	0	0	0	3	0	3
Saginaw	1	0	1	0	4	3	7
Shiawassee	0	0	0	0	3	2	5
Allegan	0	0	0	0	2	1	3
Livingston	0	0	0	0	1	3	4
Alpena	0	0	0	0	1	0	1
Cheboygan	0	0	0	0	0	1	1
Oakland	1	0	1	0	0	1	1
Monroe	0	0	0	0	0	1	1
Macomb	0	0	0	0	1	1	2
Gennessee	0	0	0	0	1	0	1
Mecosta	1	0	0	1	5	9	14
Montcalm	0	0	0	0	2	11	13
Muskegon	1	0	0	1	4	8	12
Ogemaw	5	335	2	2	7	15	22
Gladwin	0	0	0	0	0	1	1
Eaton	0	0	0	0	0	1	1
Hillsdale	0	0	0	0	2	0	2
Lenawee	0	0	0	0	1	0	1
Oscola	1	0	1	0	0	0	0
LaPeer	1	0	1	0	4	2	6
Bay	1	0	1	0	1	0	1
Roscommon	0	0	0	0	1	0	1
Wayne	1	0	1	0	0	0	0
Total Nov.	30	6,165	12	5	28	153	256
Total Oct. ..	41	3,641	15	3	99	158	257
Difference ..	11	2,476	3	2	1	0	1

Central Ohio Fields

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Ashland	6	10	3	2	1	3	4
Medina	8	9	3	2	1	11	12
Holmes	5	22	2	1	4	3	7
Lorain	1	0	1	0	0	8	8
Richland	1	0	0	1	0	2	2
Wayne	1	0	1	0	0	4	4
Summitt	1	0	0	1	1	2	3
Fairfield	1	0	0	1	2	1	3
Knox	5	0	2	3	1	6	7
Coshocton	6	142	1	2	1	1	2
Cuyahoga	1	0	1	0	1	0	1
Licking	2	30	0	0	0	2	2
Muskingum	3	98	0	1	0	12	12
Athens	3	0	2	1	3	12	15
Tuscarawas	1	0	0	1	0	6	6
Stark	5	0	2	3	4	16	20
Belmont	2	0	0	2	1	3	4
Portage	0	0	0	0	1	0	1
Crawford	0	0	0	0	0	1	1
Delaware	0	0	0	0	0	1	1
Guernsey	16	0	4	12	4	17	21
Gallia	0	0	0	0	0	4	4
Scioto	0	0	0	0	0	1	1
Pike	0	0	0	0	0	2	2
Carroll	0	0	0	0	0	3	3
Vinton	0	0	0	0	0	1	1
Lawrence	0	0	0	0	1	2	3
Meigs	16	0	2	14	6	10	16
Harrison	0	0	0	0	1	0	1
Total Nov.	85	311	23	48	32	142	174
Total Oct.	88	217	24	53	40	137	177
Difference ..	3	94	1	5	8	5	2

Indiana Fields

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Gibson	2	30	0	1	1	5	6
Sullivan	1	0	1	0	0	2	2
Adams	1	35	0	0	0	0	0
Pike	3	15	0	1	0	3	3
Daviess	0	0	0	0	0	5	5
Warrick	1	35	0	0	0	3	3
Spencer	1	30	0	0	0	3	3
Harrison	0	0	0	0	0	1	1
Porter	0	0	0	0	0	2	2
Henry	0	0	0	0	0	2	2
Shelby	0	0	0	0	0	1	1
Hancock	2	0	1	1	0	1	1
Lawrence	0	0	0	0	0	1	1
Monroe	0	0	0	0	0	1	1
Jay	5	20	0	4	0	5	5
Greene	0	0	0	0	0	1	1
Perry	2	0	2	0	0	4	4
Dubois	2	0	1	1	0	0	0
Posey	2	0	2	0	0	0	0
Delaware	0	0	0	0	0	1	1
Vanderburg	1	0	1	0	0	8	8
Washington	0	0	0	0	0	1	1
Knox	0	0	0	0	0	1	1
Newton	0	0	0	0	0	1	1
Grant	0	0	0	0	0	3	3
Scott	1	0	1	0	0	0	0
Total Nov.	24	165	9	8	1	55	56
Total Oct.	7	165	3	0	1	57	58
Difference ..	17	10	6	8	0	2	2

Illinois Fields

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Clark	1	0	1	0	0	4	4
Crawford	0	0	0	0	0	3	3
Marion	0	0	0	0	0	1	1
Madison	0	0	0	0	0	1	1
Macoupin	0	0	0	0	0	1	1
Bond	0	0	0	0	0	2	2
Perry	0	0	0	0	0	1	1
Wabash	0	0	0	0	0	1	1
Clinton	0	0	0	0	0	1	1
Jasper	0	0	0	0	0	1	1
St. Clair	1	90	0	0	0	0	0
Cumberland	0	0	0	0	0	0	0
Total Nov.	2	90	1	0	0	16	16
Total Oct.	2	1	1	0	0	15	15
Difference ..	0	89	0	0	0	1	1

Lima Fields

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Wood	0	0	0	0	0	4	4
Hancock	1	0	0	1	0	0	0
Henry	3	45	0	1	0	2	2
Allen	1	40	0	0	0	6	6
Auglaize	1	1	0	0	0	3	3
Hardin	1	0	0	1	0	1	1
Van Wert	3	13	0	0	0	4	4
Darke	0	0	0	0	0	1	1
Mercer	0	0	0	0	0	2	2
Shelby	0	0	0	0	1	2	3
Sandusky	0	0	0	0	0	2	2
Ottawa	0	0	0	0	0	1	1
Seneca	0	0	0	0	0	2	2
Wyandot	4	8	1	1	1	4	5
Total Nov.	14	107	1	4	2	34	36
Total Oct.	5	52	1	1	4	33	37
Difference ..	9	55	0	3	2	1	1

Kentucky Fields

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Ohio	46	1,578	18	0	1	12	13
Hancock	11	538	4	1	0	8	9
Allen	0	0	0	0	0	3	3
McLean	0	0	0	0	0	1	1
Haywood	0	0	0	0	0	1	1
Total Nov.	57	2,116	22	1	1	25	29
Total Oct. ..	84	4,313	23	2	1	16	19
Difference ..	27	2,197	1	2	0	9	10

Dividend Disbursements by Standard Oil Group

Cash dividend payments by the companies of the Standard Oil group for 1934 are estimated at $168,001,529 compared with $128,938,375 in 1933, an increase of $39,063,154, or approximately 30 per cent, according to figures compiled by Carl H. Pforzheimer & Co.

Due to the change in dividend period by several of the larger companies, whereby dividends are now paid semiannually instead of quarterly, the total of payments for the current quarter is directly comparable only with that of the second quarter this year when $58,708,391 was distributed. The larger total this quarter reflects the extra dividends of 25 cents a share by the Standard Oil Co. of New Jersey; of 50 cents a share by the Standard Oil Co. of Kentucky and the usual final quarter extra dividend of $1 by Chesebrough.

International Petroleum, which through the first quarter this year paid quarterly dividends of 28 cents a share, adopted a semiannual basis in June with the payment of a semiannual dividend of 56 cents a share and a special dividend of 44 cents a share. Similar dividends were recently declared for payment in December making a total of $2.28 a share or approximately $32,658,920 which will have been distributed by this company in 1934, compared with $1.09 a share or $15,529,320 in 1933.

Imperial Oil, Ltd., ranks third with total payments of $24,842,866 or 92½ cents a share, compared with $13,371,396 or 50 cents a share in 1933. Imperial also placed its stock on a semiannual dividend basis. After payment of the regular quarterly dividend of 12½ cents a share in the first quarter, a semiannual dividend of 25 cents a share and an extra dividend of 15 cents a share was paid in June and a similar dividend payable in December.

Socony-Vacuum's payments will approximate $18,543,000, or 60 cents a share this year, compared with $10,926,000, or 35 cents a share in 1933, while Ohio Oil Co. which did not pay any dividends in 1933, resumed payments in the second quarter this year and will total approximately $2,953,400, or 45 cents a share. Standard Oil Co. of Kansas also resumed dividends this year after a lapse since March, 1931.

The total of cash dividends this year was further augmented by the increased payment of Humble Oil & Refining Co. as a result of the three-for-one stock split at the end of 1933; the extra dividend of 50 cents a share in the final quarter by the Standard Oil Co. of Kentucky; the $1.20 a share paid by South Penn this year against 90 cents a share in 1933 and the 25 cents a share paid by Southern Pipe Line Co. against 20 cents a share last year.

Companies making similar payments this year are the Standard Oil Co. of California with $1 a share compared with $1.25 a share in 1933; Indiana Pipe Line Co., 35 cents a share against 40 cents a share; Standard Oil Co. of Nebraska which omitted payments since the second quarter of this year and the Standard Oil Co. of Ohio which has made no payments since the first quarter of 1933.

Dividend disbursements for the final quarter and the full year since 1929 follow:

	Fourth quarter	Full year
1934	$66,454,092	$168,001,529
1933	42,457,920	128,938,375
1932	44,112,501	161,050,895
1931	48,530,230	220,739,182
1930	83,012,644	246,526,728
1929	75,963,356	249,645,927

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Among Gulf Coast Drilling Contractors

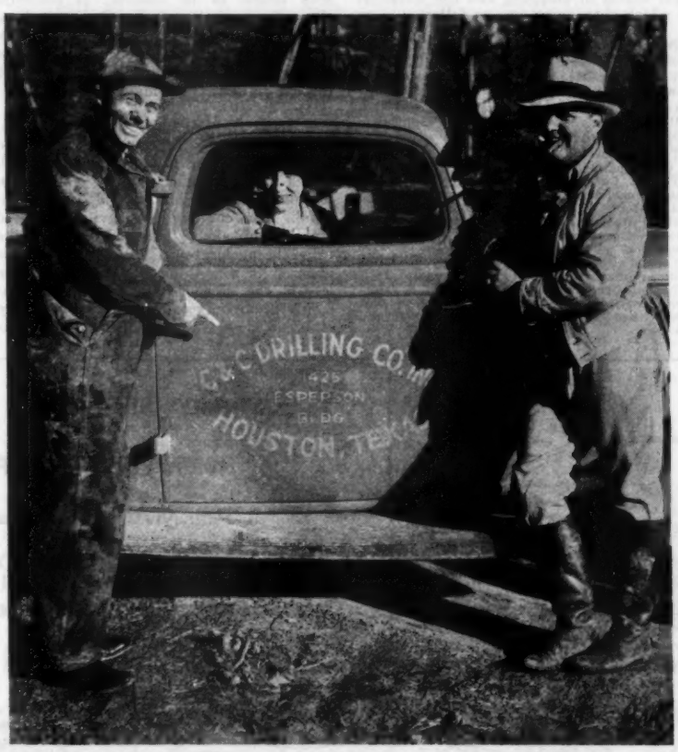
Cron & Gracey have shipped a rig into East Texas where they will drill three wells for themselves. Company also has four rigs running for the Shell Petroleum Corp. and one rig running for the Barnsdall Oil Co. in the Iowa, Louisiana, Field; one rig running for the Texas Co. in Victoria County, near Fordtran; one rig running for the Texas Co. at Manvel, Brazoria County.

Edwards Drilling Co. has bit back to 4,500 feet on No. 1 Chatimanches, Charenton Dome, near Franklin, St. Mary's Parish, Louisiana. This well is scheduled to go to 8,500 feet unless production is encountered higher. Same company's rig at Dickinson, Galveston County, which has recently completed an 8,000-foot hole for the Pure Oil Co., is waiting on orders.

C. & C. Drilling Co. has one rig drilling for H. M. Naylor at Rabbs Ridge, Fort Bend County; one rig drilling for the Gem Oil Co. in Houston County; one rig running in Jackson County; and is clearing a location in the Livingston Field to drill York & Carlton's No. 3 for B. M. York and T. A. Carlton.

DeArman Brothers Drilling Co. is making rapid progress on a well in the Conroe Field for Cameron & Cameron, in which the contractors have an interest. The well is carried as No. 2 Dudley.

George Echols has two rigs running for the Sun Oil Co. in Starr County, one for the Quintana Petroleum Co. near Sealy, Austin County; one for the Humble Oil & Refining Co. at Refugio; and one for Walter Goldston between Satsuma and Cypress in Harris County.



Left to right: B. M. York, Mrs. T. A. Carlton and Mr. Carlton

The occasion for all the good nature in evidence on the faces of B. M. York, (left), Dallas operator; Mrs. T. A. Carlton, and T. A. Carlton, president of the C. & C. Drilling Co., Houston, is the successful completion of No. 1 York and Carlton in the Livingston Field, Polk County, as a good flush producer.

Carlton started in the oil fields in 1915 as a roustabout for Gulf Refining Co. at Bull Bayou, Louisiana. After three years, he transferred to the ranks of the old Producers Oil Co. in Caddo Parish, serving first as a roughneck, then as a driller. In 1921 he accepted a job as superintendent for the Reclamation Oil & Refining Co., then operating in Louisiana, which he held until two years later when he resigned to go into the drilling contracting business for himself. Starting with one rig, he dug his first contract hole in the El Dorado, Ark., Field. Before he moved out of Arkansas he had dug 108 wells, 103 of which were producers, and had eight rigs running under his banner. There followed a long series of wells dug in Louisiana, Arkansas, Big Springs, Wink, Pampa, Hobbs, East Texas, and Conroe. Three years ago Mr. Carlton opened an office in Houston, where he has since made headquarters. His company drilled the discovery well in the Livingston Field for Dick Schwab. It also dug Schwab's discovery well on the Kirby-West acreage at Ace, Polk County. For the Encino Gas Co., Carlton dug the discovery well in the Vanderbilt Field. His rig, on a joint arrangement with Turnbull & Irwin, has cored a saturated sand in the Atkins-O'Neil well at LaWard, which gives much promise of becoming another Jackson County discovery well. Associated in the C. & C. Drilling Co. with Mr. Carlton is his brother, W. E. Carlton, vice president.

B. M. York, a neophyte in the oil business despite his creditable impersonation of a well-digger (in regalia borrowed from a roughneck) is a well known stage and screen actor. Operating as the Kingsbury Holding Co., on the York & Carlton properties at Livingston, Mr. York recently abandoned the Kleig lights for the riglights, and the company has one flush producer, with location being cleared now for a second well.

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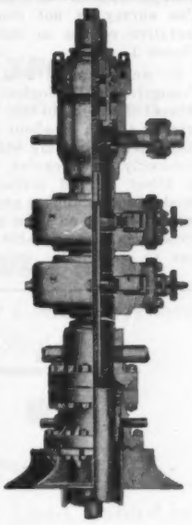
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Geologic Structure of Northwest Pennsylvania Has Deep Sand Possibilities of Gas and Oil

By S. H. CATHCART
Pennsylvania Geological Survey

The Pennsylvania Geological Survey has long maintained that the Oriskany, Medina and perhaps other "deep sand" horizons may be expected to yield gas and possibly oil in northwest Pennsylvania. As a result of the recent discovery of large volume gas field in the Oriskany sand of Potter and Tioga Counties, it is logical to expect that the possibilities of the Oriskany and other deep sands, will be tested in Warren, Erie and Crawford Counties in the not too distant future. The success of exploration in the deep sands will, we believe, depend greatly upon whether or not test wells are properly located on geologic structures that might permit accumulation of oil and gas. With this point in mind, the writer spent some weeks last summer in making a reconnaissance survey of the geologic structure of a part of this region. The survey is not completed, but the tentative results to date are shown in Figure 1.

It was demonstrated by the Second Pennsylvania Geological Survey that in general the rocks in this region dip southerly at a rate of about 20± feet to the mile. Gently dipping structural surfaces commonly are irregular, that is, they are in effect warped surfaces. That structural noses (plunging anticlines) and terraces (flats) and even gentle domes are present is a reasonable expectation. It was to outline the structural irregularities of the generally south-dipping beds that the present survey was attempted.

As shown in Figure 1, there is good evidence of a structural nose in the vicinity of Meadville and another north of Garland; plunging synclines are shown north of Mosiertown, east of Meadville, at Columbus, north of Pittsfield and at Tidioute, and terracing, as shown by widely spaced contours, is suggested at a number of localities. The U. S. Geological Survey had previously mapped a small dome southwest of Warren.

Horizons Mapped

The beds or horizons that were found most useful in mapping and the intervals at which they occur are as follows:

Base Shenango sandstone to top of Upper Meadville limestone, 50± feet.

Top Upper Meadville limestone to top of Lower Meadville limestone. 90 feet.

(A middle Meadville limestone occurs locally 40 feet above the Lower Meadville limestone.)

Top of Lower Meadville limestone to top of Corry sandstone, 85 feet.

Top of Corry sandstone to top of Cussewago limestone, 20 feet.

A 4-foot highly fossiliferous sandstone that in western Warren County makes distinctive float lies 100 feet below the Corry sandstone.

Top of Corry sandstone to top of Salamanca conglomerate, 280 to 310 feet.

Top of Corry sandstone to top of a sandstone conglomerate that lies 60 to 80 feet below the Salamanca conglomerate, 365 to 375 feet.

Top of Corry sandstone to top of Panama conglomerate, 450 to 470 feet.

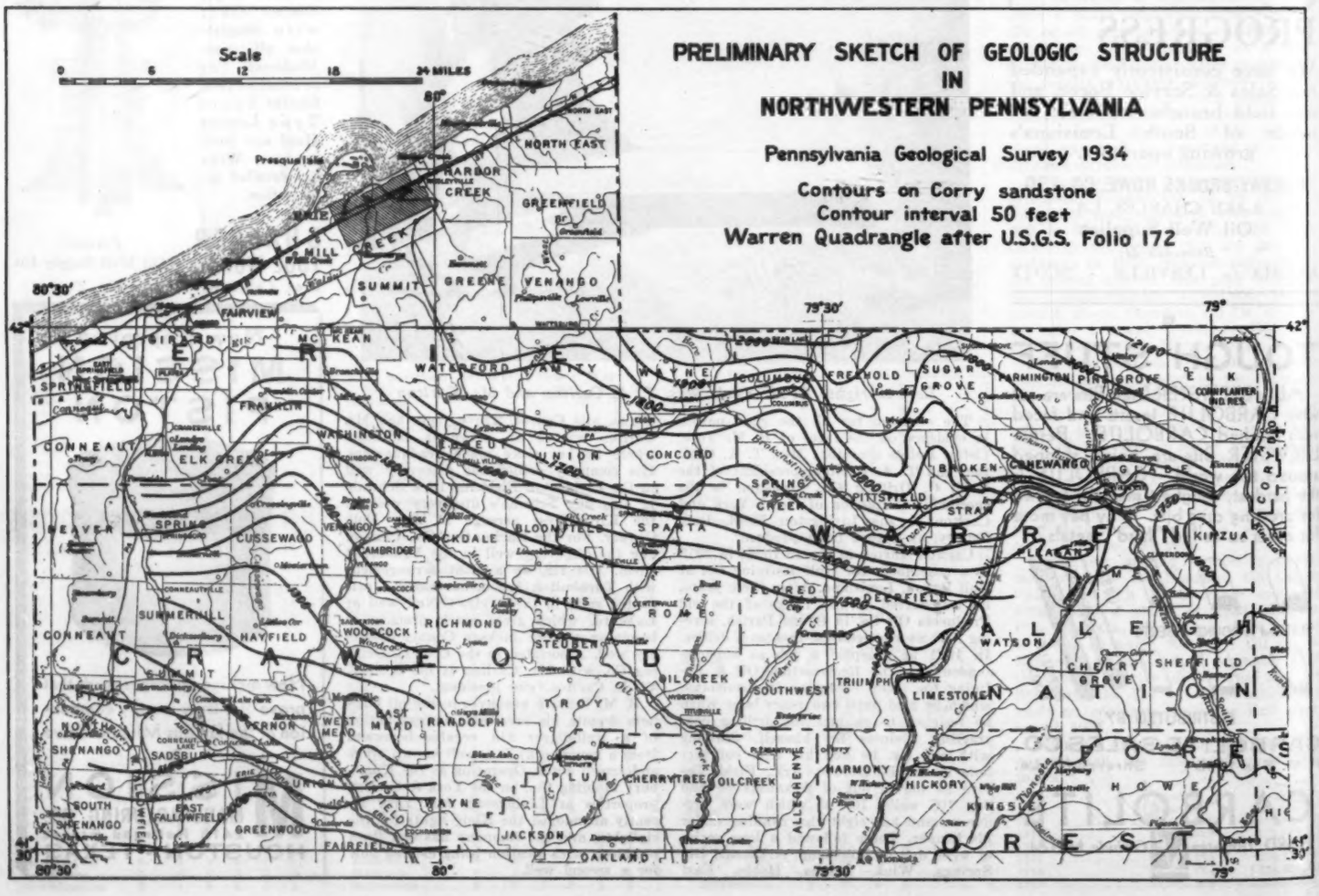
Of these horizons, the Corry sandstone is the most widely distributed in this area and is the only sandstone that may be said to have a really distinctive lithologic character. In western Crawford County the Cussewago limestone is a great aid in checking Corry identification. The Salamanca conglomerate and a sandstone that occurs about 70 feet below it are very useful east of Union City, but they were not found to be usable in reconnaissance work farther west. The Panama sandstone or Third Venango sand is the lowest member of the series that was found to be usable. It outcrops throughout northwest Crawford, southern Erie and northwest Warren Counties. Above the Corry, the Meadville upper and lower limestones proved best adapted for use in structural mapping.

Methods Used

In presenting Figure 1 the method used and the prevailing conditions with which the geologist has to contend in mapping this region should be emphasized. The country is heavily glaciated and except along principal streams the relief is moderate to slight. Bedrock is exposed is something like 1 per cent or less of the area. Usable exposures commonly occur only on entrenched tributary streams where their rate of fall is maximum. The "key" rocks are principally sandstones that commonly are not lithologically distinctive. Measurable sections probably do not average more than 150 to 200 feet due to interference from glacial debris. It is impossible to map by any method of strike and dip observation. Topographic base maps are available for all of the area surveyed, but elevations for structural use had to be determined by aneroid barometer.

The combination of factors—gentle dip, few and isolated usable outcrops, indefinite stratigraphic units, and measurements by aneroid—yielded results that justify presentation only on the very reconnaissance scale and contour interval used in Figure 1.

A detailed surface survey probably would permit construction of a map with 20-foot contour intervals that for most of the area would be a sufficiently accurate guide for use in exploratory drilling. This could be appreciably improved by subsurface data, as a very considerable number of widely scattered shallow wells have been drilled throughout the region. Data for such a map would require that elevations be accurately determined, perhaps by stadia traverse; also that carefully determined sections, even though fragmentary, be made wherever available so that inferior horizon markers could be correlated and a more abundant and uniformly distributed control established.



Field geologists will find the following publications especially valuable:

1. Vol. Q4 (Erie and Crawford Counties) of the Second Pennsylvania Geological Survey, by I. C. White. The stratigraphy is well described and many type localities of exposure are given.
2. U.S.G.S. Folio No. 172 on the Warren quadrangle, by Charles Butts.
3. Report of the Commission Survey of Pennsylvania for 1906-08. A chapter on Pre-Pennsylvanian Stratigraphy, pp. 190-204, by Charles Butts.
4. Bulletin No. 71 of American Paleontology, Vol. 21, by Kenneth E. Caster. This work, issued in 1934, is the most recent attempt to correlate stratigraphic units in this region. The bulletin is issued by the Department of Paleontology, Cornell University, Ithaca, N. Y.

The data upon which Figure 1 is drawn are on file at the office of the Pennsylvania Geological Survey, Harrisburg, and may be inspected by anyone interested.

Jacob M. Gruber Dies After Long Oil Service

Jacob Mooney Gruber, aged 81, secretary-treasurer and manager of the Concho Tool & Supply Co. of San Angelo, Tex., identified with the oil business for 56 years, died December 11 at his San Angelo residence. He had been ill since July, angina pectoris proving fatal.

Announcement of Mr. Gruber's death was not made public until Wednesday morning because of fears by relatives of its effects on Mrs. Joe F. McGinley, of Ballinger, Tex., a daughter, who is critically ill and has been confined to bed for five months. Other survivors are the widow, two sons, W. M. Gruber, president of the Concho Tool & Supply Co., and H. R. Gruber of Tulsa, vice president and sales manager of the Union Wire Rope Co., and two daughters, Mrs. F. M. Roome of Los Angeles and Mrs. H. C. Bodley of Chanute, Kans.

All the relatives except H. R. Gruber, Mrs. McGinley and Mrs. Bodley were at the bedside when Mr. Gruber died. Mrs. Bodley had returned home only two weeks earlier after visiting her father. H. R. Gruber was with his father until Sunday and was at Big Spring, Tex., when notified of his father's death.

Born in Clarion County, Pennsylvania, on February 25, 1853, Mr. Gruber in early manhood was a millwright and began the building of rigs for oil tests in his native state in 1878. Two years after the death of his first wife, at Sistersville, W. Va., in 1909, he moved to Oklahoma and entered the oil well supply business. He was with the Interstate Pipe & Cordage Co. at Tulsa for two years, then went with the Muskogee Tool Co. in 1915 and went to Ranger with that concern in 1917.

Mr. Gruber and Miss Marie Jane Stricklin, who survives him, were married at Woodward, Okla., on September 28, 1914.

Mr. Gruber remained at Ranger for 10 years, then became manager of the Union Wire Rope Co. at Cisco. He moved to San Angelo from Cisco in November, 1929, and since that time had been secretary-treasurer and manager of the Concho Tool & Supply Co., which was established by his son, W. M. Gruber, in 1928.

CRUDE OIL PRICES

Bradford District, Tide Water Pipe Co.

(May 16)

1930	June	2	$2.40
	June	17	2.25
	July	11	2.10
	Aug.	22	2.50
	Oct.	22	2.40
	Nov.	1	2.20
	Nov.	12	2.15
1931	Apr.	23	2.00
	June	3	1.75
	July	11	1.60
	July	28	1.80
	Aug.	17	2.00
	Aug.	29	2.10
	Sept.	12	2.25
	Oct.	15	2.15
	Nov.	1	2.00
	Dec.	16	1.85
1932	Mar.	14	1.82
	Apr.	25	2.02
	Oct.	3	1.72
1933	Jan.	21	1.47
	May	9	1.27
	May	22	1.37
	June	17	1.47
	June	26	1.57
	July	6	1.70
	July	17	1.85
	July	26	2.00
	Aug.	11	2.10
	Aug.	30	2.25
	Sept.	6	2.35
	Oct.	4	2.45
1934	May	1	2.55
	Nov.	6	2.30

TEST IN NEBRASKA

FREMONT, Neb., Dec. 17.—The Fremont Tribune says drilling will soon start on a location south of Fremont in Saunders County in an endeavor to put Nebraska into the list of oil producing states.

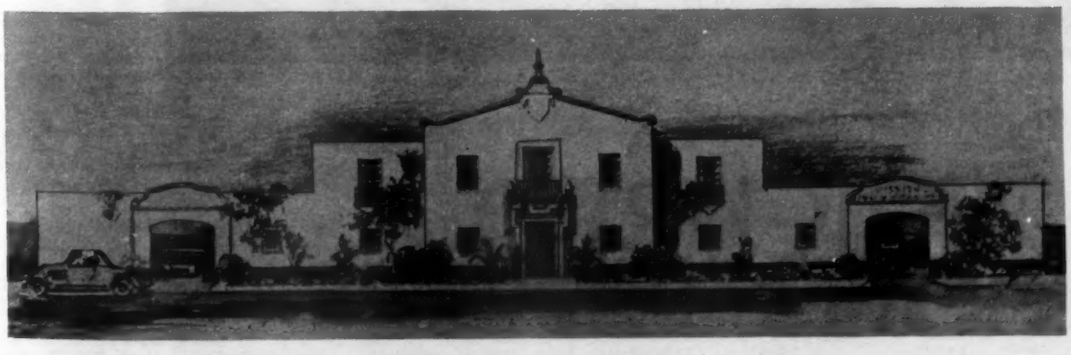
A group of Fremont and Omaha business men are financing the well. The location was made after a series of geological and geophysical tests and some core drilling. I. W. Murfin of Wichita, Kans., has been given the contract to drill.

ROCKY MOUNTAIN RUNS

Daily average production for the week ending December 15 follows:

WYOMING	
Salt Creek	17,810
Big Muddy	1,790
Badger Basin	40
Black Mountain	150
Byron	410
Dallas Derby	310
Dutton Creek	80
Elk Basin	410
Ferris	10
Frannie	3,140
Garland	40
Grass Creek	1,690
Graybull	10
Hamilton Dome	690
Hudson	270
LaBarge	1,360
Lance Creek	150
Lost Soldier	1,900
Mule Creek	shut in
Midway	70
Notches	shut in
Oregon Basin	3,380
Osage	720
Pilot Butte	30
Rex Lake	shut in
Rock River	1,440
South Casper	600
Poison Spider	200
Teapot	20
Total Wyoming	36,220
MONTANA	
Buckley-Border	280
Cat Creek	650
Cut Bank	4,710
Kevin-Sunburst	4,920
Lake Basin	40
Pondera	1,000
Total Montana	11,600
COLORADO	
Florence	230
Fort Collins and Welling on	450
Iles Dome	1,730
Moffat	430
Orchard	60
Rangely	90
Tow Creek	170
Total Colorado	3,160
NEW MEXICO	
Artesia	620
Cooper area	1,720
Eunice area	3,790
Hobbs	31,010
Hogback	210
Hospah	shut in
Jal	3,260
Lea area	1,520
Maljamar	2,360
Rattlesnake	670
Table Mesa	90
Total New Mexico	45,250
Total Rocky Mountain region	96,230

Mission Manufacturing Co. Breaks Ground for New and Modern Plant in Houston



Architect's drawing of Mission Manufacturing Co.'s new plant

Ground has been broken at the northeastern boundary of Houston, Tex., on the Humble road, for a modern manufacturing plant by the Mission Manufacturing Co., Houston. The new plant, 138 feet long by 100 feet wide, will be located on a 3¼-acre site. The architectural design is adapted from a famous California mission. The office section will be two stories high, and all second-floor offices will be air-conditioned. Shops will be of the saw-tooth type of construction to assure maximum light and air circulation. A separate building will house a modern heat-treating plant. The company will have its own water supply and a private railroad spur.

Approximately $15,000 worth of new machinery, to supplement $20,000 worth purchased in 1934, has been contracted for. The approximate total cost of the new plant, exclusive of machinery and furnishings, will be $40,000. Shops will be illuminated by the latest types of both direct and indirect lighting, and heated by a modern heating system. The new plant is expected to be completed about March 1.

The Mission Manufacturing Co. is an outgrowth of the Mission Sales Co., originally a manufacturers sales agency, organized in 1929. Officers of the company are Walter Bedford Sharp, president; Dudley C. Sharp, vice president; W. T. Campbell, vice president.

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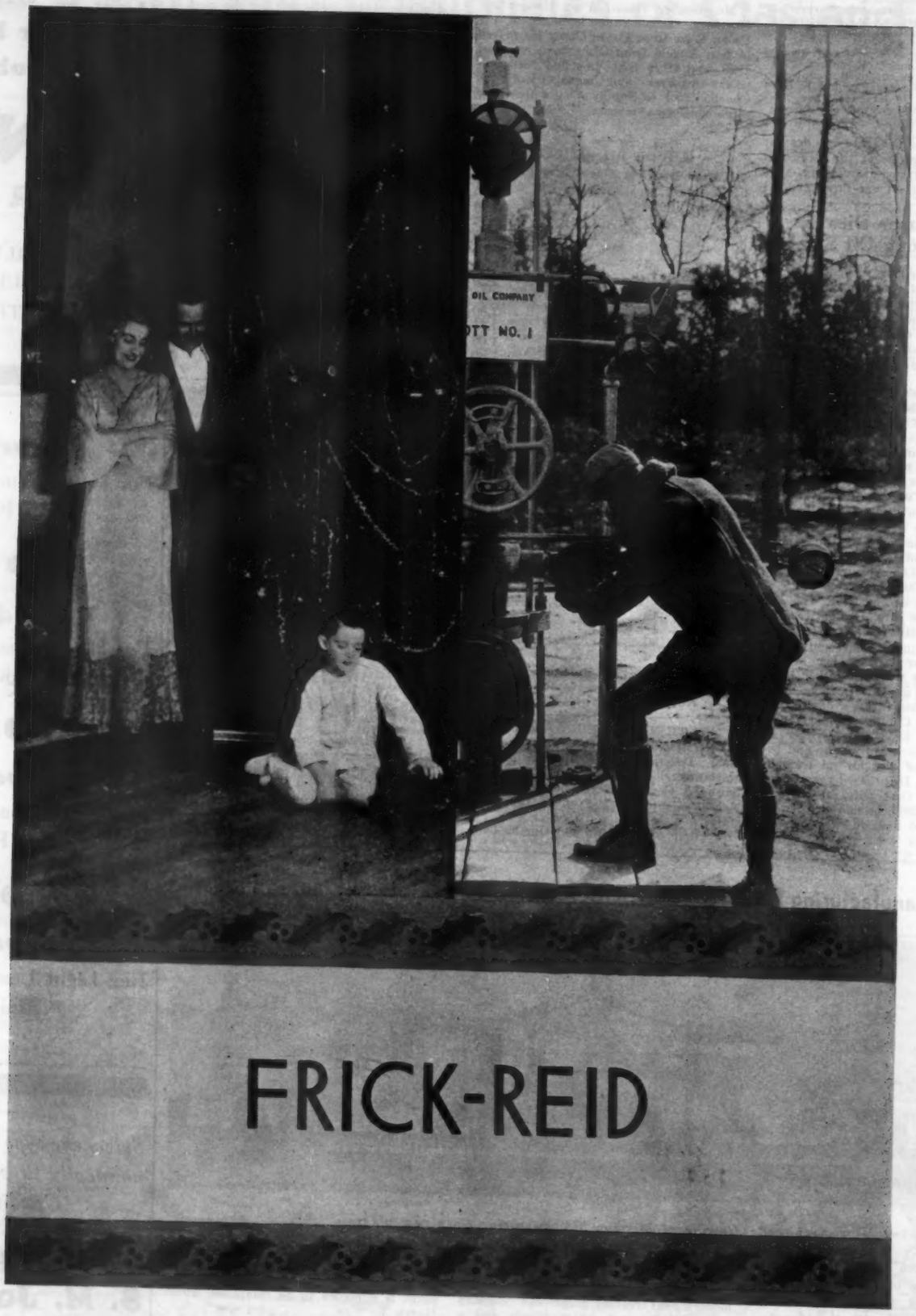
OIL COMPANY
TT NO. 1
FRICK-REID

Ogemaw County Gets Half the Ten Completions Recorded During Week in Six Michigan Fields

By PAUL A. ELLIOTT
Staff Correspondent, Michigan Fields

MUSKEGON, Mich., Dec. 17.—Completion of five new Dundee producers in the Ogemaw County Field, with an estimated daily production of over 500 bbls., featured the list of 10 completions in six Michigan fields last week. Two 1,500,000-foot gassers, one in Broomfield and the other in Isabella Township, Isabella County; a 300-bbl. oil well in Jasper Township, Midland County; a 100-bbl. well in the Oceana Field, and a dry hole in Gratiot County comprised the remainder.

Although the five new wells in Ogemaw County are comparatively small initial producers they are expected to be long-lived because of the great thickness of the pay sands ranging from 70 to 100 feet and extending through a depth of 150 to 175 feet in the Dundee limestone.

Only one of the five was newly drilled into the pay sands during the week while four were ready to be placed on the pump after acid treatment resulting in several cases in initial flows at a rate considerably greater than their estimated daily production.

Ogemaw County

One well in Section 20 of West Branch Township, Ogemaw County, made a flow of 110 bbls. in three hours after acid treatment in the Dundee.

Morris-Van Keuren Oil & Gas Syndicate's No. 1 Floyd Fisk, SE SE SE Section 20-22n-2e, West Branch Township, flowed 110 bbls. in three hours and was estimated good for at least 125 bbls. a day settled production in the Dundee topped at 2,559 feet and drilled to 2,725 feet. It had 70 feet of pay sand.

Theodore Oil Co.'s No. 4 Ogemaw Country Club, SE NE SW Section 20, was completed as a new test expected to make commercial production on the pump at approximately the same depths after acid treatment.

Joseph Malloy and associates' No. 1 Sarah Bosom, NW NW SE Section 19, West Branch Township, also was reported good for about 125 bbls. a day at a total depth of 2,726 feet, 168 feet in the Dundee limestone topped at 2,558 feet.

Ide Oil & Gas Co.'s No. 1 Jane M. Donovan, NE SE NW Section 19, was increased from 25 to 100 bbls. a day by acid treatment in the Dundee topped at 2,675 feet and bottomed at 2,742 feet.

Muskegon Oil Corp.'s No. 1 H. Wilson, NW SE NE Section 24-22n-1e, Ogemaw Township and County, was drilled to a total depth of 2,768 feet, treated with acid and expected to make as good a producer as the other four although not yet thoroughly tested following treatment.

Midland County

Two wells were completed in Midland County, one for 300 bbls. a day in Jasper Township, and the other for an increase of 325 bbls. from 60 to 385 bbls., in Porter Township.

Pure Oil Co.'s No. 1 Bond-Root, C N half SE NE Section 3-13n-2w, Jasper Township, Midland County, was brought in for 300 bbls. in the Dundee pay sands after producing for about six months from the upper Traverse formation and then being deepened. Two other tests in Jasper Township, Pure Oil Co.'s No. 3 Bond-Root, C NE NE Section 3, and George Hanners' No. 1 C. W. Hoyt, NE NE NE Section 24, also were nearing completion in the Dundee.

Sun Oil Co.'s No. 5 J. L. Miller estate, NW NE Section 16-13n-1w, Porter Township, was increased from 60 to 385 bbls. a day in the Dundee pay sands last week.

Three other Porter tests were nearing completion in the Dundee, namely: Pure's No. 8 A. C. Wyant, NE NW SW Section 16; Garfield Oil & Gas Co.'s No. 1 Mabel Finch, SW SW SE Section 21, and Columbia Oil & Gas Co.'s No. 1 Henry Northrup, NE SE SE Section 19.

Isabella County

Two gas wells each credited with an open flow capacity of 1,500,000 feet a day, were completed in the Michigan Stray gas sands.

Michigan Cities Natural Gas Co.'s No. 5 Keeler-Mitchell, C SE NW Section 10-14n-6w, Broomfield Township, was completed at a total depth of 1,308 feet in the Michigan Stray sands for a flow of 1,500,000 feet a day. Arbaugh Brothers' No. 1 Ray Aldrich, E half NE SE Section 22, same township, was still fishing at about 1,100 feet not far above the Michigan gas sands. One other new test was starting.

Old Dutch Oil & Gas Co. completed its No. 1 A. Pollard, C NE NW Section 1-15n-4w, Isabella Township, as the second 1,500,000-foot gasser of the week in the Michigan Stray sands. It was drilled to 1,301½ feet. It is the first gasser in the township and offsets a Chartiers Oil & Gas Co. well in Section 36, Vernon Township. The Wittmer company is drilling three other tests in the township, one below the Michigan sand depth and the other above, while one other test also was drilling.

Morris-Van Keuren Oil & Gas Syndicate announced plans to deepen its No. 1 J. Hart, SW NW NE Section 18-15n-3w, Denver Township, Isabella County, unsuccessful in the Dundee, to the Monroe formation, another 100 to 200 feet below 3,700 feet.

Three other Denver tests were shut down, five drilling and two starting.

Vernon Township

Old Dutch Oil & Gas Co.'s No. 2 Michael McGuire, C SW SW Section 36-16n-4w, Vernon Township, was nearing possible completion in the Michigan gas sand this week though held up with trouble at about 1,200 feet.

One other test unsuccessful in the Michigan gas sands, W. Hunter Atha's No. 1 Ed Little, NW SW SE Section 31, was still shut down at 1,470 feet awaiting decision whether to be carried deeper.

Pen-Yan Investment Co.'s No. 1 A. E. Ackerman, SW NW NW Section 12, Vernon Township, just starting, is being watched with interest as the beginning of a development program which may extend into Wise Township, Isabella County, and Grant Township, Clare County.

Sherman Township

Two Sherman Township tests had reached a depth just above the Michigan gas sands as the week closed. They were W. J. Bernier's No. 1 Clarence Beebe, C SE SW Section 36, drilling at more than 1,100 feet deep and Hal-Be-Oyle & Gas Corp.'s No. 1 O. D. Leiter, SE NE SW Section 33-15n-6w, still shut down at 1,270 feet.

Youmans-Dalton Oil Co. was driving pipe in a new test on the Charles Wheelock lease, C SW NE Section 31, same township.

Two tests in Rolland Township were inactive.

Western Michigan

A new 100-bbl. well was reported completed Saturday in the Oceana Field when John B. Northcott's No. 2 Jane Pinder, SW NW NW Section 21-15n-16w, Elbridge Township, flowed 270 bbls. during the first 12 hours after acid treatment in the upper Traverse formation.

It was estimated the well would settle to about 100 bbls. a day on the pump. Mr. Northcott announced plans to start immediately moving in for No. 3 Pinder in the same quarter section one location east of No. 2. Rig is on location for Mr. Northcott's No. 1 Wright heirs, E SW Section 30, Elbridge Township, delayed by court action.

James Flanagan's No. 1 E. Mitchell, brought in two years ago as the biggest producer in the field, drilled into bottom water when deepened about 15 feet to a total depth of 1,885 feet. It is located SE SE Section 36-15n-17w, Hart Township.

Muskegon County

West Michigan Consumers Co.'s No. 6 Fred Figge, SW SW SW Section 9-10n-16w, Muskegon Township is testing for a daily flow of 75,000 to 100,000 feet of natural gas encountered last week in the lower Traverse formation at about 1,890 feet. The well may be deepened to the Monroe gas sands at about 2,150 feet.

Allegan County

Bear Creek Oil & Gas Co.'s No. 1 John Fors, NE NE SE Section 29-3n-14w, Heath Township, Allegan County, was spudded last week as the first of several new western Michigan tests to be drilled in the county.

The second proposed test will be drilled on the Edward Moore lease in Allegan Township, just west of the city of Allegan, by the Valley Oil Co., it was announced.

Mason County

Work has been started by the Dragoon Development Co., of Muskegon, on No. 1 W. K. Young, SW NW NW Section 16-17n-15w, Logan Township, Mason County.

Kent County

F. Irwin Bryan and Harry T. Martin are driving pipe for their No. 1 A. G. Aldrich, NE SW SW Section 3-8n-11w, Plainfield Township, Kent County. Harry F. Friesner, former Muskegon operator, is contractor.

Gratiot County

One dry hole was completed in Pine River Township, Gratiot County, last week in the McClanahan Oil Co.'s No. 1 D. Ross and Hazel O. Sullivan, NE SW NW Section 33-12n-3w, which drilled into bottom water in the Dundee below 3,300 feet.

Drilling is expected to be resumed soon in the Midstates Oil Development Co.'s No. 1 Edward H. Yost, deep test located in Bethany Township, Gratiot County. It has been shut down for a month at 4,400 feet.

Ithaca Oil & Gas Syndicate was plugging back from water in the Dundee at 2,964 feet to a show of gas at 675 feet in its No. 1 Thum well in Section 19, Pine River Township.

Mecosta County

Columbia Oil & Gas Co. and others were preparing to drill into the Michigan Stray gas sands this week after cementing casing at 1,300 feet in No. 1 Arnett Brothers, NW SE Section 23-13n-8w, Hinton Township. This is the third test to be drilled on a community lease of 4,000 acres in the newly developing natural gas field of central Michigan including Millbrook and Belvidere Townships as well as Hinton and Austin Townships.

Montcalm County

Daily Crude Oil Co. announced plans to plug back its No. 4 H. D. Christensen heirs, in Section 4, Home Township, unsuccessful in the upper Traverse sands, to a show of gas in the Michigan Stray.

Saginaw County

Fred Turner and others' No. 1 Sunrise Co-operative Community, SE SW SE Section 6, Albee Township, Saginaw County, was drilling below 2,200 feet on the way to lower formations after failure to pick up production in the Berea. It will be carried at least to the Dundee.

New Locations

State permits for six new locations including five in central Michigan and

(Continued on Page 67)

Administrator's Report on Crude Stocks

Stocks of domestic and foreign crude petroleum at the close of the week ended December 8 totaled 325,970,000 bbls., a decrease of 787,000 bbls. over the total of 326,757,000 bbls. on hand at the end of the preceding week, Harold L. Ickes, Secretary of the Interior and administrator of the code of fair competition for the petroleum industry, announced today. This decrease, which followed an increase of 434,000 bbls. during the previous week, comprised a decrease of 869,000 bbls. in domestic crude stocks, and an increase of 82,000 bbls. in foreign stocks.

According to current reports of the industry for the week ended December 8, in comparison with those for the previous week, daily average crude oil production was about 2,437,000 bbls., a gain of 37,000 bbls., and runs to stills about 2,490,000 bbls., a gain of 75,000 bbls. Daily average imports amounted to 81,000 bbls., a gain of 12,000 bbls. over the previous week. The approximate daily average balance of crude oil for the week ended December 7 was as follows (barrels): Production, 2,437,000; imports, 81,000; decrease in stocks, 112,000, equals runs to stills, 2,490,000; exports, fuel and losses, 140,000.

CRUDE PETROLEUM STOCKS REPORTED BY COMPANIES HOLDING 100,000 BBLS. OR MORE

Grade of crude oil—	Stocks held by reporting companies Dec. 1 (bbls.)	Dec. 8 (bbls.)
Pennsylvania Grade	4,668,000	4,595,000
Other Appalachian	1,071,000	1,022,000
Lima-N.E. Indiana-Michigan	1,208,000	1,154,000
Illinois-S.W. Indiana	11,393,000	11,429,000
N. Louisiana and Arkansas	9,769,000	9,770,000
West Texas and S.E. New Mexico	29,799,000	30,222,000
East Texas	31,156,000	30,674,000
Other Mid-Continent	153,763,000	152,353,000
Gulf Coast	18,419,000	18,473,000
Rocky Mountain	27,602,000	27,545,000
California	34,919,000	35,106,000
Total dom. crude	323,712,000	322,842,000
Foreign crude	3,045,000	3,127,000
Total crude	326,757,000	325,970,000

Wildcats in Scott, Trego and Harvey Counties, Kansas, Show Good Oil or Gas Production

By JAMES McINTYRE

Over 100 miles from the nearest pipe line the Atlantic Oil Producing Co.'s far western wildcat test in Scott County stands with 3,700 feet of 25 gravity oil in the hole from a Mississippi lime formation at 4,679-86 feet. The well is estimated to be good for 200 bbls. a day. This is the most westerly oil producer in Kansas, located in C SE NE Section 15-20-33w. The nearest production is in Trego County, but the nearest pipe line is in Russell County.

In spite of the fact that the importance of the discovery is discounted in some quarters, there was a rush of land men and independent leasers from the more easterly oil centers to Scott County as soon as the news broke that the Atlantic had a showing.

The Imo Oil & Gas Co. and Wood Brothers of Covington, Okla., have a 15,000,000 to 20,000,000-foot gas well in their No. 1 Sperling, SE NE NE Section 23-22-2e, in Harvey County, a wildcat. The gas comes from Chat at 2,920-83 feet.

The above two wells and the Alma Oil & Gas Co.'s discovery in Trego County, reported in the late field news last week and which was still shut down when the last report on it was filed, were the most important developments in Kansas in the past week. It is estimated as high as 500 bbls. in potential production, although it has not been tested.

New Pipe Lines

Stanolind Pipe Line Co. is laying an 8-inch line from Township 26-2e, in Sedgwick County, to Township 21-13w in Stafford County, also a 6-inch pipe line from Section 16-14-14w, Russell County, to Section 3-18-10w, Rice County, which parallels a line of the same size now in operation.

The same company is also laying an 8-inch line from Buston in Rice County to the Brandenstein Pool in Township 19s-10w, in the same county, that will parallel a 6-inch main line now in place.

Estimated Production

Estimated daily average production of Kansas for the week ending December 15 and for the preceding week follows:

	Barrels	
	Dec. 15	Dec. 8
Hollow	6,075	5,875
Ritz-Canton	10,100	11,375
Voshell	5,500	5,225
Johnson	1,865	1,335
Sedgwick County	7,660	7,375
Nikkell	3,600	5,200
Ellsworth County	2,902	2,766
Barton County	1,115	1,972
Rice County	13,500	11,520
Reno County	12,570	10,865
Ellis County	327	320
Kingman County	1,296	1,165
Stafford County	1,653	965
Russell County	10,285	7,325
Greenwood County	11,500	11,500
Butler County	19,000	18,600
Other pools	17,977	18,867
Total Kansas	126,975	122,150

Ellsworth County

Magnolia Petroleum Co.'s No. 3 Andrea, SW NW SW Section 7-17-10w, Ellsworth County, was completed. It pumped 98 bbls. in 24 hours from Kansas City lime at 3,192-98 feet, which had been acidized.

Twin Drilling Co.'s test, No. 1 Rolfe, SW NW SW Section 13-17-9w, which opened a new pool, tested 251 bbls. in a nine-hour pumping test from Siliceous lime at 3,200-05 feet. It had not been acidized.

Russell County

Aylward and Skelly Oil Co. completed No. 1 Killian, SE SE NE Section 28-13-14w, Russell County, which pumped 1,604 bbls. of oil in a 24-hour test producing from Siliceous lime at 3,271-78 feet. It had not been acidized.

Hartman & Blair have cellar dug for No. 1 Swartz, SE SW NE Section 8-15-14w. Phillips Petroleum Co. was building rig for No. 2 Holland, NW SW SW Section 13-14-15w. Texas Co. made a location for No. 1 Holland, SW NW SW Section 13-14-15w. Lario Oil & Gas Co. and Texas Co. have material in for No. 1 Boxberger, NW cor. Section 24-14-15w. Phillips Petroleum Co. made a location for No. 1 Boxberger, NW SW NW Section 24-14-15w.

Texas Co. had not completed its No. 1 Neidenthal, NE SE NE Section 23-14-15w, which was reported last week as having swabbed 819 bbls. of oil in 19 hours from Siliceous lime at 3,244-55 feet, which had been acidized.

H. H. Blair's No. 1 Fink, SW NW SE Section 16-14-14w, had granite wash at 3,318 feet; a small showing of oil at 3,435 feet and a hole full of water at 3,474 feet, and was shut down.

J. J. Hall and others' No. 2 Miller, SE cor. Section 30-14-13w, found oil in Oswald lime at 2,905-10 feet. The hole filled up 250 feet and the lime was acidized.

Tom Palmer and others' wildcat, No. 1 Herbel, NW NW SW Section 4-12-11w, had Mississippi lime at 3,359 feet; a hole full of water at 3,390 feet and was drilling at 3,420 feet.

Rice County

Empire Oil & Refining Co.'s No. 1 Specht, NE cor. Section 20-20-10w, in the Sharpe Pool, Rice County, pumped 297 bbls. of oil and 71 bbls. of water from Siliceous lime at 3,344-46 feet, which had been acidized. It was completed. The Texas Co.'s No. 6 West, NW cor. Section 21-20-10w, made 50 bbls. of oil and 181 bbls. of water from Siliceous lime at 3,343-45 feet and was completed without acidizing. Same company's No. 7 West, NW SW NW Section 21-20-10w, pumped 522 bbls. of oil and a little water from Siliceous lime at 3,326-30 feet, and was completed.

Shell Petroleum Corp. completed No. 2 Ploog, 1,320 feet north and 440 feet west of SE cor. Section 33-18-9w, in the Ploog Pool. It had an initial production of 285 bbls. of oil and 23 bbls. of water from Siliceous lime at 3,270-72 feet which was not acidized.

Twin Drilling Co. has rig up for No. 1 Wenke, SE cor. Section 7-20-10w. Rogers and others had rig on the ground for No. 2 Rainett, SE SE SW Section 3-21-6w.

Barton County

Empire Oil & Refining Co.'s No. 1 Schilling, C NW SW Section 26-21-13w, Barton County, was dry and abandoned at 3,755 feet. It was acidized several times but with relatively small results in the way of oil production.

McPherson County

Shell Petroleum Corp. was building rig for No. 3 Koehn, NE SW NE Section 16-21-3w, McPherson County.

J. H. Miller, Stanolind Oil & Gas Co. and Amerada Petroleum Corp.'s No. 5 Flock, NE NE NW Section 1-20-2w, got a hole full of water at 3,408-12 feet and was abandoned.

Dickey Oil Co. was rigged up to start No. 2 Gustafson, SE SW NW Section 30-18-2w.

Corbett, Barbour and others had a failure in No. 1 Schmidt, SW SW SE Section 10-17-16w, in Rush County, a wildcat test, which got a hole full of water in Siliceous lime at 3,575-3,600 feet. It was abandoned.

Sedgwick County

E. B. Shawver completed No. 4 Russell, NE SE SE Section 17-28-1e, in Sedgwick County. It was acidized in Chat at 3,071-3,117 feet and responded with an initial flow of 355 bbls.

Stearns and others were drilling at 3,368 feet in No. 1 Stearns, NE NE SE Section 17-25-1e, being deepened from 3,337 feet.

Dickey Oil Co. was building rig for No. 1 Brown, NW NW NE Section 20-28-1e, and was rigging up No. 1 Lohkamp, SE SE NW Section 20-28-1e.

Reno County

Olson Oil Co. and Shell Petroleum Corp.'s No. 2 Downie, SW SE NE Section 14-23-4w, Haury-Burrton Field, Reno County, was completed. It flowed 6,016 bbls. of oil in 24 hours from Hunton lime at 3,588-3,605½ feet, which had been acidized.

Olson Oil Co. and Shell Petroleum Corp. have temporarily abandoned No. 2 Sabine-B, C SW SW Section 13-23-4w, which has failed to produce much oil after it had been shot and acidized. Hunton lime was found at 3,604-22 feet. It showed a small oil production on the swab and was plugged back to 3,617 feet and shot. It produced 140 bbls. of oil and 20 bbls. of water. It was then acidized without results. The hole was plugged back to 3,397 feet but no test has been made of the Chat formation topped at 3,249 feet.

Olson Oil Co. and Shell Petroleum Corp.'s No. 2 Garvin, C NW SE Section 35-23-4w, deepened from 3,320 feet to 3,371 feet, was acidized and flowed 1,035 bbls. of oil in 24 hours. It was completed.

Barnsdall Oil Co. has ponds dug for No. 6 Sabin-C, SE cor. Section 11-23-4w. Marathon Oil Co. made a location for No. 2 Vansickel, SW SE NW Section 23-23-4w.

Stafford County

Atlantic Oil Producing Co.'s No. 1 Hohner, NW SE SE NE Section 31-23-14w, is a location.

Harvey County

Mabee Consolidated Corp. and Shell Petroleum Corp.'s No. 2 Nikkell-B, NW SW SW Section 8-22-3w, is a 107-bbl. completion in Hunton lime at 3,405-67 feet. It had been drilled to Wilcox sand at 3,573-82 feet where it had a hole full of water.

Marathon Oil Co.'s No. 4 Klassen, NE SE NW Section 30-22-3w, flowed 816 bbls. from Chat at 3,166-3,225 feet and was completed.

Cowley County

Ben Gralapp was rigging up No. 1 Wycoff, SW cor. Section 9-34-3, Cowley County.

Butler County

R. L. Hodge was drilling at 875 feet in No. 1-A Glaze, 1,120 feet from south and 300 feet from east line of SE Section 4-29-4, Butler County. Magnolia Petroleum Co. made a location for No. 9 Suits, 1,120 feet from the north and 600 feet from the west line of SW Section 10-27-4. Maxwell Oil & Gas Co. was rigging up No. 4 Maxwell, NE NE SE Section 31-24-4.

Cromwell & Lewis completed No. 6 Stern, NW SE NE Section 33-27-6, which started off at 65 bbls. of oil on the pump in 24 hours, after an acid treatment in Viola lime at 3,085-87 feet.

Sheldon and others completed No. 1 Houston, NW NW NE Section 12-25-3. It pumped 205 bbls. initially, following an acid treatment at 2,668-75 feet.

Vickers Petroleum Co.'s No. 1-A McCranes, C W half SW SW Section 36-24-3, was completed. It was a 200-bbl. initial pumper from Mississippi lime pay at 2,710-14 feet, which had been acidized.

Greenwood and Woodson Counties

C. Sheedy's No. 1 Lodge, NW NE NE Section 28-25-15, Woodson County, was good for 25 bbls. a day on the pump after an acid treatment in lime at 1,492-1,504 feet. It was completed.

Cooper and others have a 25-bbl. pumper in No. 2 Erickson, SW SE NW Section 17-24-13, Greenwood County lime pay at 1,587-91 feet, was acidized. It is a completion.

Paulhamus and others' No. 2 Leedy, SE SW NW Section 25-22-9, deepened from 1,035 feet to 2,409 feet, pumped 100 bbls. initially after a shot in sand at 2,390-2,409 feet.

Selby Oil & Gas Co.'s No. 2 Leedy, NE NW SW Section 25-22-9, has material on the ground.

Skelly Oil Co.'s No. 28 Wick, C S half SW SW Section 27-22-11, was completed. It was good for 27 bbls. from sand at 1,887-1,991 feet.

Wildcat Operations in Kansas

Week Ending December 15

(Descriptions are East unless marked otherwise)

BARBER COUNTY

Sam Jarvis et al's No. 1 Morrisse, C SE NE Sec. 23-30-10w.
Rig.

BARTON COUNTY

D. I. Hall et al's No. 1 Arnold, SE SE SW Sec. 19-18-15w.
Rig.

Murphin and Davis' No. 1 Lanterman, NW SE Sec. 15-19-11w.
Siliceous lime 3,332 ft.; T.D. 3,355 ft.; 2,800 ft. of oil in hole.

C. L. Price et al's No. 1 Ehrlich, NW SE Sec. 19-16-13w.
T.D. 360 ft.; fishing.

Treleaven & Brimm et al's No. 1 Haas, SW cor. Sec. 20-18-15w.
T.D. 3,290 ft.; U.R. csg.

Walter Shearen et al's No. 1 Kempler, SE NE NE Sec. 31-18-11w.
S.D. 300 ft.

BUTLER COUNTY

Gaines et al's No. 1-A McKinley, NE NE SE Sec. 19-29-4.
T.D. 1,950 ft.; acidized.

Seibel, Great Basin Oil Co. et al's No. 1-A McKinley, NE SE Sec. 19-29-4.
K.C. lime 1,888-1,915 ft.; will acidize.

F. H. Unruh et al's No. 1-A Joseph, SE SW NW Sec. 18-26-4e.
Rig.

CLAY COUNTY

Seidel Bros.' No. 1 Younken, C S½ SE NW Sec. 21-9-4.
8-in. 1,378 ft.; drlg. 1,400 ft.

Severs et al's No. 1 Meyers, NE NW NW Sec. 4-10-4.
Mississippi lime 1,775 ft.; T.D. 1,834 ft.

COWLEY COUNTY

Ben Gralapp's No. 1 Kukuk, SW SW NW Sec. 6-32-4.
8-in. 2,023 ft.; drlg. 2,050 ft.

Otstot et al's No. 1 Eckhardt, SE NW Sec. 15-35-6.
Spudded and S.D.

DICKINSON COUNTY

Dutch Oil Co.'s No. 1 Phillips, C NE NW Sec. 15-15-1e.
T.D. 2,495 ft.; U.R. 8-in. csg.

ELK COUNTY

Lassen's No. 1 Ferguson, SE SE SW Sec. 21-30-8.
1,760,000 ft. of gas 2,056-58 ft.; drlg. 2,152 ft.

ELLSWORTH COUNTY

Twin Drlg. Co. et al's No. 1 Rolfe, SW NW SW Sec. 13-17-9w.
3,100 ft. oil in hole; Siliceous lime 3,200-05 ft.; pumped 251 bbls. in 9 hrs.

(Continued on Page 84)

Twenty Completions in the Lower Eastern Fields Including Fair Sized Wells, Both Oil and Gas

By STAFF CORRESPONDENT

PITTSBURGH, Pa., Dec. 17.—There were 29 completions in the lower Eastern Fields during the past week and they included some fair wells, both oil and gas. Fifteen were gas wells and 14 were producers with an initial production of 343 bbls. There was also one dry hole.

SOUTHEAST OHIO

Completions in Southeast Ohio consisted of six producers and one gas well. In Guernsey County, the Preston Oil Co. completed a test on the Rhea R. Lena farm in Section 10, Millwood Township, in the Berea grit at a depth of 1,322 feet. It is showing for 10 bbls. a day.

In Hocking County, the Preston Oil Co. completed No. 1,562 on the Sunday Creek Coal Co. lease in the NE Section 6, Ward Township. It was drilled in the Clinton sand at a depth of 3,628 feet and produced 40 bbls. natural the first day. The well will not be shot at the present time on account of the recent curtailed allowable, but it has the appearance of a fair well.

In Medina County, there were four producers completed, all shallow wells. In Litchfield Township, Section 1, D. A. Lake completed No. 20 on the Pearl and Frank Weaver farm in the Berea grit at 317 feet. It produced 20 bbls. the first day after shot. In Chatham Township, Tract 14, Lot 6, the Oko Oil & Gas Co. completed No. 31 on the L. W. Brinker farm in the Berea grit at 332 feet. It produced 25 bbls. the first day after shot. In SW of Lot 24, Brunswick Township, the Kemrow Co. completed a test on the Gretner farm in the Berea at a depth of 440 feet. It is showing for 3 bbls. a day after shot, and is outside production. In the same quarter section, the same operators completed a test on the Helman farm, mapped as the William Strong farm, in the Berea at 478 feet. It produced 2 bbls. the first day after shot, and is also outside production.

In Muskingum County, the Ohio Fuel Gas Co. completed a second test on the Howard Tunis farm, Lot 8, Muskingum Township. It was drilled in the Clinton sand, total depth 3,587 feet, and is a gas well gauging about 100,000 feet a day.

SOUTHWEST PENNSYLVANIA

The Oriskany sand test being drilled by James H. Duff and John T. Galey on the Lehigh Portland Cement Co. lease in Muddy Creek Township, Butler County, made about 200 feet progress after cementing and then began developing trouble with gas puffs and caves. At 4,646 feet, the test is shut down with the bailer and tools in the hole and a fishing job. The Oriskany in this test is somewhat deeper than expected and is looked for at about 4,800 feet as, in correlating with the Munnell test, the interval between the Pennsylvania series and the Devonian series has thickened. The importance of this test is considerable, and it is expected that the tools will be recovered and drilling resumed.

There were four gas wells and one small producer completed in southwest Pennsylvania during the week. In Morris Township, Greene County, about 1,000 feet south of the A. E. Sprowls' No. 1 in the East Findley Township, Washington County, Myers, Hoskinson and others completed a test on the H. H. Francis farm in the Gordon stray sand at a total depth of 2,928 feet. The top of the sand was at 2,898 feet with oil showing at 2,918-22 feet which is estimated at about 3 bbls. a day.

In Richhill Township, Greene County, there were three completions. Freeland and others completed a test on the A. E. McCord farm at a total depth of 3,234 feet. The Big Injun was at 1,880-2,147 feet with gas showing at 1,934-50 feet. The Fourth sand was at 2,853-2,897 feet with gas showing at 2,890 feet. The Elizabeth sand was at 3,116-37 feet with gas showing at 3,122-35 feet. The total volume of gas from the formations is about 500,000 feet a day.

In this township, Wasmuth and Callahan completed a test on the Mary Bell Durbin farm at a total depth of 2,808 feet. The Gordon sand was at 2,604 feet with gas showing at 2,607 feet which with the Fifty Foot gas has a volume of only about 80,000 feet a day.

In the same township, Frye and McCracken drilled deeper the No. 1 on the William Gillett farm to a total depth of 3,003 feet. It is a gas well gauging about 125,000 feet a day from the Big Injun sand only. The Big Injun was at 1,898-2,230 feet with the gas showing at 2,088 feet. The Pittsburgh Coal in this test was at 838 feet.

In Greene Township, Greene County, the Equitable Gas Co. completed drilling deeper the No. 1 on the Margaret Kiger farm at a total depth of 3,502 feet. No additional gas was found in the lower formations and as the old gas has a volume of 68,000 feet, it is undecided whether to keep the well.

In Greene County, the Carnegie Natural Gas Co. has reached a depth of 2,670 feet on the Thomas Brewer farm, the No. 1 being deepened. This is in Whitely Township. In Alleppo Township, Lewis & Co. have made a location for a test on the S. C. Chess farm.

In Amwell Township, Washington County, the Carnegie Natural Gas Co. is drilling at 1,725 feet in the second test on the M. C. Manon farm and have reached 625 feet in the test drilling on the R. M. Carrons farm. The Wise Oil & Gas Co. is down 2,530 feet in a test on the Jacob Snyder farm.

In East Findley Township, Washington County, the Natural Gas Co. of West Virginia has reached 2,010 feet in the test on the J. C. Sansom farm and are rigging up the tools for a test on the G. W. Tilton farm. This company also has a location for a test on the Thomas F. Ealy farm.

In South Franklin Township, Washington County, the New Oil & Gas Co. has reached 1,475 feet in a test on the Anna Chambers farm. The Carnegie Natural Gas Co. is down 2,912 feet in deepening the No. 1 on the S. A. Dague farm.

WEST VIRGINIA

There were seven producers, 10 gas wells and one dry hole reported from West Virginia during the week. The seven producers had an initial production of 240 bbls. being aided by two new wells in the Pike Pool. In Clay district, Ritchie County, Lucas and Mahaney completed another producer on the J. F. and Laura Kelley farm in the Injun sand at a depth of 1,800 feet. It produced 120 bbls. the first day, natural.

About 1,600 feet northwest of the town lot excitement of the Pike Pool in this district, H. N. Rinehart completed a second test on the George Millbarger farm in the Injun sand at a depth of 1,802 feet. It produced 100 bbls. the first day natural.

In Grant district, Ritchie County, there were three small producers. R. W. Richards completed a test on his own property in the Big Injun sand at a depth of 2,040 feet. It is showing for 3 bbls. a day. The National Compression Co. completed drilling deeper the No. 3 on the John Lynch farm to the Injun sand, 1,938 feet. It will also make 3 bbls. a day. The Cairo Oil Co. decided to make a producer of the test drilled on the J. B. Markey farm in Grant district after finding the Injun sand dry. It was plugged back to the Maxton sand from which it will make about 1 bbl. a day.

In Roane County, Kenney M. Hunt and others completed a test on the W. R. Miller farm in Curtis district, mapped as the Lizzie Moore heirs, in the Salt sand and it is showing for 12 bbls. a day.

In Wayne County, about 1,500 feet southeast of the No. 1 on the farm, the Edward Oil & Gas Co. completed No. 3 on the Albert Ronk farm on Patrick Creek in Butler district. It is rated at 1 bbl. a day from the Berea sand.

Gas Wells

In Boone County, the Owens Illinois Glass Co. completed No. 22 on the Peytonia Coal Land Co. lease in Sherman district in the Berea sand and have a fair gas well, gauging about 794,000 feet a day.

In Calhoun County, there were several wells. Park Bowser completed No. 9 on the Dora Ramsburg farm in Center district at a total depth of 2,500 feet. The Maxton sand was at 1,855-80 feet with gas showing at 1,858-68 feet and gauging 212,000 feet a day natural. The Big Lime was at 1,940-2,026 feet with gas at 2,021-26 feet gauging 312,000 feet a day. The Big Injun was at 2,026 feet and extended to 2,074 feet with a gas showing at 2,051-61 feet. The Berea was placed at 2,437-46 feet with no showing. The total volume is estimated at about 400,000 feet a day.

In the same district, the Chemical Oil Co. completed No. 7 on the Tazwell Taylor farm at a depth of 2,426 feet as a gas well gauging about 300,000 feet a day natural. A short log is as follows: Maxton 1,675-88 feet; show oil at 1,680-88 feet; Big Lime 1,920-75 feet; Keener 1,975-99 feet with gas at 1,986-91 feet; Big Injun 1,999-2,037 feet with gas at 2,014-37 feet; Berea sand 2,398-2,402 feet and void.

In Washington district, Calhoun County, Kenny and Phillips completed a test on the S. A. Carpenter farm in the Injun sand at 2,097 feet and it shows for about 68,000 feet of gas a day. The Big Lime was at 1,945-2,042 feet; the Big Injun at 2,042-97 feet with the gas showing at 2,063-83 feet.

In Clay County, in an outside test in Pleasant district, H. C. Zogg completed a second well on the Thompson Coal & Land Co. It will make a small gas well gauging about 68,000 feet a day.

In Kanawha County, the Lincoln Gas Co. completed No. 6 on the Fred J. Tabet farm, known as the Whittaker tract, in Elk district in the Weir sand at 1,905 feet. It is a gas well gauging about 552,000 feet a day.

In Marion County, the Owens Illinois Glass Co. drilled deeper the No. 3 on the J. W. Toothman farm at a total depth of 5,100 feet. The Pittsburgh Coal was at 462 feet and the Fifth sand at 2,853 feet from which formation there was about 88,000 feet of gas a day. There were no formations found below the Fifth sand and it is of interest on account of the unusual depth in this county.

In Ritchie County, there were two gas wells and a dry hole. In Grant district, the Devil Hole Oil Co. completed a fair gasser on the Ritchie Lumber Co. property. It was a test and reached gas in the Big Injun sand at 1,951 feet. It gauges about 1,500,000 feet a day. In Clay district, the Reno Oil Co. completed a test on the B. F. Wells farm in the Big Injun sand at 1,814 feet. It has a volume of about 212,000 feet of gas a day. In Murphy district, S. M. Whan drilled a test on the W. R. Nutt farm deeper through the Injun sand at 1,788 feet. It was a dry hole.

In Wetzel County, the Hannibal Gas Co. completed a test on the James S. Haudenschildt farm in Proctor district at a total depth of 2,967 feet. The well has a total volume of about 650,000 feet a day. The Pittsburgh Coal was at 933 feet. The Gordon stray sand at 2,881-

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Complete Fifteen Wells in Central Ohio; Twelve in Indiana; One in Lima Area

By GEORGE A. WHITNEY
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Dec. 17.—In the Lima division, one well was completed. In the Central Ohio division 15 completions were announced, Indiana reported 12 wells. Illinois and Kentucky failed to bring in any wells during the week.

In the Lima Field, Newcomer and others' No. 1 on the William D. Bennett farm, Section 29, Tymochtee Township, produced an initial of 5 bbls. at a depth of 1,369 feet. Miller and others are drilling No. 1 L. F. Bogard farm, Section 4, same township. In Crane Township, same county, Upper Sandusky Oil & Gas Co. is drilling No. 9 on the O. J. Weiker farm, Section 28, and McPheron is drilling No. 1 on the Lydie Geir heirs farm, Section 33, same township. Wood and others are rigging up for No. 2 on the Thomas Bowman farm, Section 15, Pitt Township, same county.

In Wood County, Ottawa Oil & Gas Co.'s No. 1 Frank Emch farm, Section 36, Lake Township, showed a small gas volume and a very light oil showing at a total depth of 1,137 feet.

In Marion County, Claridon Oil & Gas Co.'s No. 1 on the H. C. Barnhart farm, Section 11, Claridon Township, is reported around 2,180 feet.

CENTRAL OHIO

Of the 15 completions reported in the Central Ohio Field, four were oil wells with an initial of 162 bbls., seven were gas and four were dry.

In Ashland County, Ohio Fuel Gas Co.'s No. 1 John Mutchler farm, Section 3, Hanover Township, was dry at 2,505 feet.

In Medina County, W. J. Dempsey's No. 1 on the E. Adams 123-acre farm, Section 3, York Township, produced an

(Continued on Next Page)

Central West Fields

(Continued from Preceding Page)

initial of 10 bbls. from the Berea at 361 feet. Mr. Dempsey is an old operator and lives at Lakewood, Cuyahoga County. In Guilford Township, Ohio Fuel Gas Co.'s No. 1 on the Carrie A. Bell farm, Lot 25, is a gas well at a total depth of 3,414 feet. Same company is drilling No. 1 Leo A. Hauck farm, Lot 50, same township, and No. 1 John D. Danley farm, Lot 45, same township.

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the WIDTH of the brim?
or
the HEIGHT of the hat?
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In Lorain County, Ohio Fuel Gas Co.'s No. 1 Adelia M. Haskins farm, Lot 52, Eaton Township, is dry. McMillan and others have a location for No. 2 on the Sylvia Jackson farm, Lot 15, Carlisle Township. McCarnless & Beal are shut down at a depth of 2,325 feet in No. 1 on Columbus Mutual Life Insurance Co.'s property, Lot 65, Eaton Township.

In Holmes County, Ohio Fuel Gas Co.'s No. 1 on the Bert B. Finney farm, Section 26, Monroe Township, produced an initial of 32 bbls. Same company's No. 1 Clarence Conner farm, Section 32, was dry at 3,227 feet in Ripley Township.

In Richland County, Ohio Fuel Gas Co.'s No. 3 on the Minerva Ward farm, Section 16, Worthington Township, is a gas well.

In Wayne County, McClay Brothers are starting a test on the Celia Strodbeck farm, Section 25, Chippewa Township.

In Summitt County, Wiser Oil Co. is drilling No. 1 on the W. E. Wright farm, Section 3, Northampton Township.

In Stark County, East Ohio Gas Co.'s No. 1 Katherine Belden farm, Section 19, Plain Township, is a gas well at 4,423 feet. Brendel Producing Co. is drilling No. 4 I. and E. Markley farm, Section 9, same township. In Perry Township, East Ohio Gas Co. is drilling No. 1 John Graber farm, Section 23. Same company has a rig up for No. 1 on the Dan and Mary Braucher farm, Section 10, Jackson Township.

In Muskingum County, Ohio Fuel Gas Co.'s No. 2 Howard Tunis farm, Section 19, Muskingum Township, is a gas well at 3,533 feet.

In Knox County, Pure Oil Co.'s No. 5 on the W. D. Heaton farm, Section 21, Union Township, produced 40 bbls. initial, and No. 6 is a location.

In Coshocton County, Preston Oil Co. is drilling on the Cary D. Harris farm, Section 17, Perry Township. Ohio Gas Light & Coke Co. has a location for No. 3 on the Nicholas Lower farm, Section 10, Mill Creek Township.

In Licking County, Blue Rock Oil Co.'s No. 5 on the Rachael Freece farm, Section 14, Fallsburg Township, produced an initial of 80 bbls. at a total depth of 3,022 feet. In Mary Ann Township, Everett Gas Co.'s No. 1 Mary H. Scott farm, Section 18, was a gas well at 816 feet. Blue Rock Oil Co. is drilling No. 10 on the Walter Hoyt farm, Section 7, Perry Township. Wehrle Gas Co. has a rig up for No. 2 on the Charles Flora farm, in Newark Township.

In Tuscarawas County, John Marks is drilling on the John A. Hart farm, Section 22, Oxford Township.

In Athens County, Twenty-Five Associates Co. is starting No. 5 on the W. E. Henthorn farm, Section 17, Berne Township.

Kenova Oil & Gas Co. is drilling on the Frank C. Halstead farm, Lot 101, Shaler Township.

In Guernsey County, East Ohio Gas Co. has a rig up for No. 4 on the Joseph and Retta Cadd farm, Section 1, Wheeling Township, and J. L. Miller is drilling No. 1 F. N. Gray farm, same section. M. J. Purdy and others are drilling No. 1 on the R. O. and Ester Gibson farm, Section 16, Millwood Township. Four Leaf Clover Co. is drilling No. 1 on the R. S. Grimes farm, Section 15, Monroe Township. In Willis Township, George Jewell and others are drilling No. 1 on the John S. Calvert farm, Section 1, same township. Ferguson and McCullough are drilling No. 2 Herbert Watson farm, Section 2, same township, and No. 5 on the Fred Foraker farm, Lot 20, same township.

In Gallia County, H. W. Bowers and others' No. 7 on the B. and O. Mink farm, Section 34, Addison Township, was dry at 353 feet. In Lawrence County, C. C. Wolfe and others have a rig on the Edward Miller farm, Section 28, Rome Township. Goddard and others are drilling on the Ryland Creel farm, Section 7, Union Township, Pike County.

In Meigs County, Meigs Development Co.'s No. 4 on the R. D. and G. Chapman farm, is a gas well at 882 feet.

INDIANA

Of the dozen completions reported from Indiana there was nothing large, but most were commercial producers of oil or gas.

In Gibson County, Mid-West Development Corp.'s No. 1 on the Henry Erdell farm, SW SW Section 23, Center Township, is a gas well. Robert Watson is drilling No. 3 Laura Dillon farm, Section 18, Washington Township. Gilbert Schoulty is drilling No. 1 L. Armstrong farm, in Donation 107-108, Washington Township. Big Four Oil & Gas Co. is drilling No. 1 on the O. H. Redburn farm, SE NW Donation 107.

In Sullivan County, Dome Gas Co. is drilling Nos. 1 and 2 on the W. Jennings farm, NE NE Section 19, Curry Township.

In Pike County, A. E. Davis' No. 2 on the Frank Aurand farm, NE SE Section 19, Washington Township, is a gas well. Bruner and Abbott are drilling No. 13 on the D. M. Shawhan heirs farm, Section 35, Madison Township, and H. C. Darby and others are drilling on the Samuel Dearing farm, Section 29, Lockhart Township.

In Daviess County, Indiana Southwestern Gas Corp.'s No. 2 on the Henrietta Goslin farm, NW SE Section 9, Harrison Township, is a gas well at 687 feet. Midwest Development Corp. is drilling on the Ruth Akester and others farm, SW NE Section 9, same township. W. C. McBride is drilling No. 1 on the Emily Ricketts farm, Section 6, Hart Township, Warrick County.

In Spencer County, T. F. Seitz' No. 1 F. F. and G. A. Grass farm, NE SE Section 11, Hupp Township, produced 20 bbls. initial in the Trenton lime formation, and I. A. Polhamus' No. 5 William Grass farm, same section, is reported at 30 bbls. initial.

In Perry Township, Charles E. Dice found a dry hole on the Harry Metz farm, SE SW Section 2, Anderson Township. Hollingsworth and Harvey are drilling No. 3 on the Matt Gayer farm, Section 6, same township. Hupp and French are drilling No. 1 on the Walter Hafle farm, Section 21, Tobin Township. In Oil Township, O. W. L. Oil Co.'s No. 1 James Flannagan farm, SE SW Section 25, is drilling.

In Knox County, Mead Oil Co.'s No. 1 on the M. Bond farm, NW SW Section 14, Busseron Township, is a gas well with 1,500,000 feet at a depth of 595 feet. Same company is drilling No. 1 M. E. Blann farm, NE SE Section 15, and No. 1 J. A. McAndrews farm, SW NW Section 14, same township.

In Posey County, L. R. Henley's No. 2 on the Laurance Luigs farm, Section 23, Robinson Township, produced an initial of 50 bbls., and he is drilling No. 1 on the Lena Falls farm, Section 13, same township.

In Dubois County, F. L. Dameron is drilling No. 1 A. Kluedner farm, SE NW Section 26, Marion Township.

In Washington County, A. B. Bement's No. 1 John S. Spangler farm, NW SW Section 3, Brown Township, was dry. In Vernon Township, Charles E. Wyman is drilling No. 1 Offa Chastian farm, NE SE Section 12.

In Martin County, A. T. Spaulding and F. G. Fischer are drilling on the Emmett and Emma Yarnell farm, NW SW Section 25, Perry Township.

In Vanderburg County, Drake and Moffett's No. 7 on the John and Mary Effinger farm, SW Section 33, produced 100 bbls. initial. Same parties' No. 1 on the John and Catherine Fridy farm, NW NE Section 29, same township, was dry at 1,004 feet, and United Oil Co.'s No. 1 Eda and Arthur Schmitt farm, Section 3, was dry at 1,142 feet. A. A. Douglass and others are drilling No. 1 on the Christian R. Riggs farm, Section 15, Perry Township, same county.

Total runs made from wells served by the Illinois Pipe Line Co. in western Kentucky during November, were 137,285.01 bbls.

High Gravity Oil Pool Opened in Kay County; Wilcox Zone in Okla. City Gets Increase

By JAMES McINTYRE

Bay Oil Co. opened a new pool in Kay County, Oklahoma, a little northwest of the Mervine Pool. Its No. 1 Hudson, SW SW SE Section 14-28-3, a wildcat had sand at 2,965-91 feet and flowed by heads at the rate of 25 bbls. per hour. The oil is 42 degrees in gravity. Drilling was continued and on Monday the well was reported drilling at 3,022 feet. The identity of the pay sand had not been definitely fixed. It was thought by some to be Skinner, but the high gravity of the oil cast doubt on this. The Mervine Field produced from Newkirk and Hoover sands and Mississippi lime, the last named about 3,060-80 feet.

Bay Oil Co. has assigned an interest to the Texas Co. in leases on the W half SW and Lot 2 and SW NW Section 14-28-3, Lots 5, 6 and 7 in Section 15-28-3.

E. H. Moore and others' No. 1 Akers, C NE NW NE Section 36-2-6, Fitts Pool, in Pontotoc County, was opened, and flowed 725 bbls. in four hours through a 1-inch choke from pay at 4,391-94 feet, total depth. It was again shut in.

At the meeting of Fitts operators held one day last week it was the opinion of some that fully 100 tests would be drilled in the Graben area before its producing limits are fixed. Meanwhile, a lot of inside wells will be drilled in addition to the outlying tests. Southern Pontotoc, northern Johnston, a part of Murray and a part of Coal Counties are included in the Graben area. Dry holes will not condemn much in that region. The hope of big production will act as a stimulus to the wildcatter regardless of the failure of a somewhat near neighbor to find oil or gas.

South of Chandler, in the Gessman area, Lincoln County, the Texas Co.'s No. 1 Hoover, NE NE SE Section 33-14-4, flowed 380 bbls. in 24 hours and 386 bbls. the second day from sand at 3,050-57 feet, but was preparing to deepen. The company's No. 1 Gessman, offsetting No. 1 Hoover, made 280 bbls. a day in initial production from sand at 3,000-50 feet about 10 weeks ago. It had been drilled to Wilcox sand where it got a hole full of water. The upper sand that produced was believed to be Cleveland sand. No. 1 Gessman is good for 180 bbls. a day at this time.

Higher Allowable

The Corporation Commission of Oklahoma granted the petition of the Indian Territory Illuminating Oil Co. to permit the wells in the Wilcox zone in the Oklahoma City Field to produce an additional 1 per cent of the current potential from wells not illegally overproduced, and the potential of which has been determined in accordance with the rules and regulations of the commission. This makes a total of 12 per cent allowable. The order effective December 1, permitted the withdrawal of 115,061 bbls. of crude oil daily from the Wilcox zone, or common source of supply.

Osage County

Completions in Osage County in the past week included the following routine wells:

Texas Co.'s No. 4, SW SE NE Section 29-25-8, deepened from 1,113 feet to Burgess sand at 2,445-64 feet, pumped 8 bbls. in 24 hours.

Sinclair Prairie Oil Co. and Norbla Oil Co.'s No. 2, SW SW NW Section 11-24-7, dry and abandoned at 885 feet.

Continental Oil Co. and Sinclair Prairie Oil Co.'s No. 8, C E half E half SE Section 5-23-9, Tucker sand at 2,115-53 feet, 160 bbls. of oil in 24 hours.

E. O. Platter and Indian Territory Illuminating Oil Co.'s No. 4, NE NE SE SW Section 3-22-9, sand 495-505 feet, shot with 40 quarts, 8 bbls. in 24 hours.

New work first reported included F. O. Akin's No. 2, 390 feet, from south line and 300 feet from east line of NE Section 18-26-12, rig. A. H. Kasishke's No. 4 Swanson, 300 feet from north and 1,000 feet from east line of NW Section 21-25-6, building rig. Western American Oil Co.'s No. 20, 800 feet from north and 396 feet from west line of SW Section 4-24-10, rigging up machine. Murray Ringold's No. 7, NW NE NE SW Section 30-21-9, rigging up machine. W. C. Elliott's No. 1-A, 800 feet south and 225 feet west of C Section 10-21-12, rigging up machine.

In the South Burbank Field, Skelly Oil Co.'s No. 6, SE SW SE Section 16-25-6, was plugged back to 2,834 feet and shot at 2,826-34 feet. It swabbed 70 bbls. of oil and salt water .

Phillips Petroleum Co.'s No. 16, NW SE NE SE Section 31-24-12, had dry Bartlesville sand at 1,710-56 feet and was bottomed in shale at 1,773 feet. It will be completed as a pressure well.

Finance Oil Co.'s No. 1, C W half E half SW Section 19-23-9, found Wilcox sand at 2,472-81 feet, total depth. The hole filled with oil and was shut in for tankage. It was an old well deepened from 2,115 feet. Five-inch pipe was set at 2,472 feet.

Noble County

C. C. Bennett and others' No. 14 Neil, SW NW SE Section 15-23-2w, in the old Billings Pool in Noble County, is drilling deeper from 2,408 feet and had reached a depth of 2,674 feet.

There are nine drilling wells in the Polo Pool but none of them was at an interesting depth at the close of the report. The pool also has nine producing wells, but their production is deeply curtailed.

Sinclair Prairie Oil Co.'s No. 1 Cawood, a wildcat east of the Lucien Pool, located in the C SW NW Section 27-20-2w, set 7-inch casing at 4,980 feet, in Viola lime and drilled to 4,983 feet. It flowed 907 bbls. the first 24 hours with 3,000,000 feet of gas.

Estimated Production

Estimated production by pools in Oklahoma for the week ending December 15 and for the preceding week follows:

	Barrels	
	Dec. 15	Dec. 8
Allen	7,100	7,125
Asher-West Asher	1,500	1,525
Burbank	9,100	9,100
South Burbank	9,250	9,500
Balance of Osage	26,000	25,000
Blackwell	4,800	4,800
Bristow-Slick	9,750	10,250
Crescent	3,600	3,800
Cromwell	4,400	4,400
Cushing-Shamrock	13,250	13,250
Chandler district	6,000	6,000
Duncan district	4,250	4,400
Fish	6,775	4,150
Fitts	3,550	1,700
Gray	2,300	1,475
Graham	3,500	3,600
Healdton	9,200	9,250
Hewitt	4,800	5,000
Holdenville	2,300	2,400
Keokuk	1,875	1,900
Konawa	1,900	1,675
Lucien	8,775	7,400
Marshall-Lovell	1,000	1,000
Oklahoma City	165,425	157,550
Papoose	1,250	1,250
Sasakwa and Townsite	2,325	1,950
Sholem-Alechem	4,100	4,150
Seminole Field:		
Bowlegs	10,250	7,925
Carr City	6,075	4,100
Earlsboro	8,875	7,450
East Earlsboro	9,350	6,525
South Earlsboro	900	775
Little River	13,075	11,025
East Little River	700	500
Maud	1,325	1,100
Mission	3,150	2,350
Seminole	10,075	7,450
East Seminole	1,100	975
Searight	2,700	2,475
Total Seminole	67,575	52,650
St. Louis-Pearson	32,075	17,575
Tatums	5,500	5,500
Tonkawa-Garber-Thomas	6,250	6,500
Wewoka	4,500	4,500
Yale-Jennings	4,750	4,750
Other pools	58,825	59,725
Total Oklahoma	487,050	454,800

Logan County

Eason Oil Co.'s No. 1 Herren, C N half NE NE Section 4-16-4w, in the south end of the Crescent Pool, flowed 524 bbls. in 24 hours from Wilcox sand at 6,266-90 feet, which had been shot. It was not yet completed.

Kingfisher County

Jadeka Development Co.'s No. 1 Frakes, C SW NE SW Section 16-15-6w, Kingfisher County, was bottomed at 7,612 feet with the drill pipe stuck, and may be abandoned. It topped the Mississippi lime at 7,570 feet.

Lincoln County

In the West Chandler Pool in Lincoln County, Sinclair Prairie Oil Co.'s No. 3 Hopkins, SW SW NE Section 12-14-3, had Wilcox sand at 5,061-82 feet and swabbed 87 bbls. of oil and 24 bbls. of water in 24 hours.

In the Chandler area, Slick-Urschel, Inc.'s No. 7 Kentzleman, NW NW SW Section 7-14-4, will be abandoned. It had nothing but salt water in Wilcox sand at 5,087-92 feet and a shot in Hunton lime did no good.

Mid-Continent Petroleum Corp.'s No. 1 Wagoner, NW SW NW Section 10-13-6, swabbed 450 bbls. of 22 gravity oil in 14 hours from Wilcox sand at 4,208-80 feet, total depth 4,290 feet.

Wildcat Operations in Oklahoma

Week Ending December 15

NORTHERN OKLAHOMA

BECKHAM COUNTY

Fred Coogan et al's No. 1 Shelton, SW cor. Sec. 32-10-25w.
Rigged up and S.D.

CADDO COUNTY

H. W. Lee et al's No. 1 Stacey Ferrell, SW NE NE Sec. 3-6-13w; (2,000-ft. test).
Drlg. 890 ft.

Denver Prod. & Ref. Co.'s No. 1 Noe, NW SW SW Sec. 34-10-10w.
T.D. 11,230 ft.; fishing for drill pipe.

CLEVELAND COUNTY

Mid-Continent Pet. Corp. et al's No. 1 Collett, C E½ NE SW Sec. 35-10-1w.
Cored dry sand 6,938-52 ft.; abd.

COAL COUNTY

Moore & Deaner's No. 1 Edward, NW NE SE Sec. 27-2-8.
Oil Creek sand 7,315 ft.; perforated pipe at 6,460-70 ft.; 6,540-50 ft.; S.W.

J. D. Petty Oil Co.'s No. 1 McMillian, SW NW NE Sec. 16-1s-8.
Sandy shale at 1,000-34 ft.; S.D.

GRADY COUNTY

Carter Oil Co. and Magnolia Pet. Co.'s No. 1 Harrison C-34, C NW NW Sec. 28-3-5w.
Drlg. 8,167 ft.

GRANT COUNTY

Helmerich & Payne's No. 1 Crouse, C NE SW Sec. 29-26-8w.
Skidded rig 60 ft. N; T.D. 350 ft.; S.D.

HUGHES COUNTY

Evans & Morris' No. 1 Day, NW NW SW Sec. 30-6-10 (700-ft. test).
Drlg. 606 ft.

Freeman et al's No. 1 Kite, NW NW NE Sec. 3-6-10.
S.D. 154 ft.

Meyers et al's No. 1 Scott, NE SE NW Sec. 23-6-8 (1,000-foot test).
Sand 585-600 ft.; H.F.W.

Turner et al's No. 1 Williams, SW cor. Sec. 15-7-10.
Rig.

KAY COUNTY

Harris & Haun's No. 1 Schuessler, C NW SW Sec. 3-28-2.
Spudded.

Bay Oil Co.'s No. 1 Holden, SW SW SE Sec. 14-28-3.
Drlg. 2,390 ft.

Carter Oil Co.'s No. 1 Fowler, C NE Sec. 12-27-1e.
Set 10-in. csg. 2,075 ft.; drlg. 2,858 ft.

Lancer Oil Corp.'s No. 1 Hugo, SE NW NW Sec. 32-28-5.
Location.

S. R. McCorkle et al's No. 1 Smith, SW cor. Sec. 6-26-4.
Moving in material.

KINGFISHER COUNTY

Black Gold Oil Co.'s No. 1 Cole, C SW NE Sec. 24-18-5w.
Building rig.

Jadeka Dev. Co.'s No. 1 Frakes, C SW NE SW Sec. 16-15-6w.
Mississippi lime 7,570 ft.; T.D. 7,612 ft; drill pipe stuck; abd.

LINCOLN COUNTY

Tom Bennett et al's No. 1 Bolby, C SE SW Sec. 27-12-2.
Cored 5,065-81 ft.; S.D. for. csg.

R. L. Kemp and Comall Oil Co.'s No. 1 Dooley, NE SW Sec. 26-17-6.
Drlg. 1,540 ft.

Derrickson and Reserve Pet. Co.'s No. 1 Law, SE SW NE Sec. 25-14-2.
Rig on ground.

Chester L. Carlock's No. 1 Young, C N½ NW NW Sec. 23-15-5.
Rig.

Sinclair Prairie Oil Co.'s No. 1 Hoyt, NW SW NE Sec. 5-14-3.
Wilcox sand 5,061-82 ft.; swbd. 87 bbls. of oil, 27 bbls. of wtr. in 24 hrs.

Sinclair Prairie Oil Co.'s No. 1 Boland, SW cor. Sec. 25-12-3.
Second Wilcox 5,536-50 ft.; H.F.W.

LOGAN COUNTY

Gypsy Oil Co. and Sinclair Prairie O. & G. Co.'s No. 1 Manning, C NW NW Sec. 3-17-4w.
Layton sand 4,863-97 ft.; 18,500,000 ft. of gas; comp.

Helmerich-Payne et al's No. 1 Sturgis, SE NW.
Drlg. 2,250 ft.

Shell Pet. Corp. et al's No. 1 Hirzel, SE SW SW Sec. 7-16-2w.
Building rig.

Sinclair Prairie Oil Co. et al's No. 1 Dunbar, Sec. 25-15-4w.
Avant 4,698 ft.; drlg. 5,110 ft.

Sinclair Prairie Oil Co. et al's No. 1 School Land, SE cor. Sec. 36-17-1w.
Drlg. 2,925 ft.

NOBLE COUNTY

Marathon Oil Co.'s No. 1 Gilbert, NE cor. Sec. 24-22-2.
Drlg. 3,378 ft.

Sinclair Prairie Oil Co.'s No. 1 Cawood, C SW NW Sec. 27-20-2w.
Viola 4,970 ft.; set 7-in. csg. 4,980 ft.; T.D. 4,983 ft.; flowed 907 bbls. of 41 grav. oil in 24 hrs. by heads.

OKFUSKEE COUNTY

Amerada Pet. Corp.'s No. 1 Jaynes, NW NW SW Sec. 20-10-10.
Spudding.

Mid-Continent Pet. Corp.'s No. 1 Haney, SW SE NE Sec. 24-12-8.
Rig on ground.

OKLAHOMA COUNTY

R. Carl Larkin's No. 1 Brobine, NW NW NE Sec. 33-13-5w.
Rig on ground.

J. C. Shaffer et al's No. 1 Bullard, SW cor. Sec. 13-13-2w (Wilcox test).
Pawhuska lime 2,859 ft.; drlg. 3,275 ft.

Springrose Drlg. Co.'s No. 1 Edwards, C SE Sec. 19-11-1.
T.D. 6,540 ft.; P.B. to 5,500 ft.

OSAGE COUNTY

Peters Pet. Co. and Norbla Oil Co.'s No. 1, SW cor. Sec. 15-25-8.
H.F.W. 1,040 ft.

PAYNE COUNTY

Marathon Oil Co.'s No. 1 Potts, C SW SW Sec. 27-19-2.
Digging pits.

PITTSBURG COUNTY

McAllister Pet. Corp. et al's No. 1 Chunn, C SE NW Sec. 29-4-14.
Drlg. 2,980 ft.

P. H. Gray et al's No. 1 Lee, NW SE Sec. 13-5-13.
Drlg. 690 ft.

PONTOTOC COUNTY

E. M. Blanchard's No. 1 Crabtree, NE SE NE Sec. 27-3-6.
S.D. 2,920 ft.

Dandridge et al's No. 1 Stafford, NW cor. Sec. 5-1-6e.
T.D. 650 ft.; S.D.

(Continued on Next Page)

This well offsets a 360-bbl. initial producer of heavy gravity Wilcox sand oil drilled by the Amerada Petroleum Corp. nearly two years ago, and which was shut in until recently. As a rule Wilcox sand produces oil of unusually high grade but now and then it yields a black low-gravity crude. An instance of this was the Wilcox sand discovery of Homer Lamb in Montgomery County, Kansas, some years ago. In the latter case one of the big refining companies found a special use for this crude and Lamb had a ready market for it at a premium price over other oils of like gravity.

Oklahoma County

Marathon Oil Co.'s No. 1 Keefer, NW cor. Section 5-13-3w, Edmond Pool, Oklahoma County, flowed 249 bbls. of oil in 23 hours, through tubing and choke.

Stanolind Oil & Gas Co. and Amerada Petroleum Corp.'s No. 1 Suenram, NE cor. Section 6-13-3w, flowed 617 bbls. in four hours through choke.

Marathon Oil Co. has made a location for No. 2 U. R. Ball, NW SW NE Section 19-12-1w. Western States Oil Corp. is rigging up rotary to start No. 1 Haddock, NW SW SE NE Section 22-11-3w. Royalty Service Corp.'s No. 1 Ownby, 80 feet from the south and 1,255 feet from the east line of the NE Section 22-11-3w, deepening from 6,483 feet.

Springrose Drilling Co. plugged back to 5,500 feet in its No. 1 Edwards C SE SE Section 19-11-1, in the Newalla area in Oklahoma County. This well was a small producer in Hunton lime at 6,025 feet and was drilled to what may have been Wilcox sand at 6,514-40 feet without results. Four hundred feet of drill pipe in the hole prevented deeper drilling. When cement has set the upper formations will be tested.

Cleveland County

Another expensive failure to find oil in Cleveland County outside the southern tip of the Oklahoma City Field, was abandoned in the past week. Mid-Continent Petroleum Corp. and others' No. 1 Collett, C E half NE SW Section 35-10-1w, was declared dry at a total depth of 6,952 feet. It had Wilcox sand at 6,927-52 feet.

Okmulgee and McIntosh Counties

Lindy Oil Co. completed No. 4 Gooden, NW SW SE Section 28-12-14, a 300,000-foot gasser at 612-24 feet.

R. Ford's No. 2 McIntosh, CSL N half SW SE Section 10-13-14, Okmulgee County, was dry and abandoned in sand at 1,140-90 feet.

H. J. Metzgar's No. 2 Daniels, SE SW SW Section 8-15-17, Muskogee County, is a 10-bbl. completion in sand at 1,237-67 feet.

Routt and others deepened No. 1 Clans, SE NE SW Section 20-14-12, Okmulgee County, to Wilcox sand at 2,743-53 feet ,and had a 20-bbl. showing of oil.

Metzgar and others were drilling at 380 feet in No. 3 Daniel, SE SW SE SW Section 8-15-17, Muskogee County.

Jones and others completed No. 1-A Spaulding, NE NW SE Section 34-15-18, Muskogee County, a 50-bbl. well, after a shot.

Pawnee and Creek Counties

Hoover Brothers' No. 1-A Ralston, C N half N half SE Section 9-16-10, Creek County, was dry and abandoned at 2,813 feet.

Culbertson and others' No. 4 Thomas, CSL NE SE Section 10-16-10, was a hole full of water from sand at 902-05 feet, and was abandoned.

Magnolia Petroleum Co.'s No. 8 Street, NW NE NE Section 3-17-8, was shot in sand at 1,333-68 feet and made a 25-bbl. completion.

C. W. Titus' No. 4 Casey-B, NW NE SW Section 3-17-8, had Layton sand at 1,330-55 feet and started at 250 bbls. per day. Nos. 3, 4, 5, and 6, on this lease, all completed recently, averaged 306 bbls. per well in initial production, all of it from Layton sand.

F. O. Akin's No. 1 Hillis, NE NE SE NE Section 6-18-8, was dry and abandoned in Tucker sand at 2,830-59 feet.

C. W. Titus spudded No. 7 Casey, NE SW SE Section 3-17-8. Donk & Hughes have rig up for No. 6 Slick, CWL NW NW Section 10-17-8. Morgan & Flynn made a location for No. 1 Franklin, NW SW NE Section 26-19-9. Ringold and others have rig up for No. 4 Hughes, CWL E half SE Section 12-20-9, to drill it deeper.

Greater Seminole Area

Snider Drilling Co. completed No. 3 Wind, 660 feet north and 330 feet east of C Section 35-11-9, Okfuskee County. It is a 15-bbl. well at 1,450-64 feet.

Carter Oil Co. and others' No. 2 Sanford, C SE NW SE Section 16-9-6, Seminole County, had Cromwell sand at 3,553-77 feet, total depth 3,584 feet. It flowed 110 bbls. naturally through tubing and was completed.

Poteo Oil Co. spudded No. 2 Dixon, SW NE NW Section 12-9-8, a twin, in Seminole County.

Texas Co. was building rig for No. 1 School land, NW SW NW Section 16-8-5, Pottawatomie County.

Texas Co.'s No. 2 Carliner, SW NW SE Section 27-8-8, Wewoka district, Seminole County, was shot in Wilcox sand at 4,194-99 feet, and produced 50 bbls. of oil and 75 bbls. of water. It was completed.

Clark and others completed No. 1-A Jordan, SW SE SE Section 10-7-4, St. Louis Field, Pottawatomie County. It was acidized in Hunton lime at 3,685-3,853 feet and made 93 bbls. of oil.

Joe Hicks and others made a location for No. 1 Brandenberg, SE SE NW Section 21-7-4.

Bud Smith's No. 1-A Woods, SW NW SW Section 31-7-5, pumped 25 bbls. of oil and 30 bbls. of water from Viola lime at 4,108-4,251 feet

Magnolia Petroleum Co. made a location for No. 3 Dole, SW SW SW Section 16-7-8. Champlin Refining Co. has cellar and pits dug for No. 4 Sea, SW NE SE Section 30-7-8, and for No. 5 Sea, NW NE SE Section 30-7-8. Empire Oil & Refining Co. made a location for No. 4 Myers, NW SE NE Section 31-7-8.

Commercial Drilling Co. and others have rig up for No. 1 Horick, NW SW NW Section 1-6-4, Pottawatomie County.

Westgate Oil Co. and others' No. 1 Schroder, NE NW NE Section 6-6-5, deepened from 4,040 feet to 4,100 feet, swabbed 300 bbls. of oil and salt water. It will be given a pumping test. Same operators made a location for No. 2 Schroeder, 990 feet from north and 825 feet from west line of NE Section 6-6-5.

Mudge Oil Co.'s No. 1-A Fleet, NW SW NE Section 11-6-7, was a hole full of water from sand at 1,428-98 feet, and was abandoned.

Pontotoc County

Mayfield and others' No. 1 Norris, SW SW SW Section 19-5-5, in the Beebe Field, Pontotoc County, is a 10-bbl. completion in Viola lime at 2,504-69 feet.

Sinclair Prairie Oil Co.'s No. 1 Gordon-B, SE SE SW Section 21-5-5, was completed in Calvin sand at 1,813-29 feet, a 10-bbl. well.

Boettcher Oil & Gas Co.'s No. 1 Alexander, 660 feet west of C Section 24-4-7, Allen Field, pumped 100 bbls. in 24 hours from sand at 1,698-1,701 feet. It had been deepened from 1,280 feet. It was completed.

Fitts Completions

Oklahoma's most interesting field at this time, the Fitts Pool, in southern Pontotoc County, registered a number of completions in the past week, all of the wells having been reported previously after they hit the pay. The list includes Magnolia Petroleum Co.'s No. 2 Tom Norris, NE SW NE Section 25-2-6, 671 bbls. in six hours from sand at 4,330-65 feet.

Crosbie & Moran's No. 1-A D. Hardin, SW SW NE Section 30-2-7, Bromide at 4,070 feet; sand at 4,150-85 feet; flowed 2,150 bbls. in 4½ hours.

Magnolia Petroleum Co.'s No. 1 Hardin, SW NW NE Section 30-2-7, 153 bbls. net oil in 24 hours. This well had been drilled to 4,400 feet and plugged back and redrilled and plugged back twice more, finally being bottomed at 4,342 feet and acidized.

Magnolia Petroleum Co.'s No. 2 Hardin, SE NE NW Section 30-2-7, Bromide at 4,290 feet, sand at 4,285-4,300 feet, 1,398 bbls. of oil in five hours.

Magnolia Petroleum Co.'s No. 3 Hardin, SE NW NE Section 30-2-7, drilled to 4,345 feet and plugged back to 4,338 feet and acidized, flowed 458 bbls. in 20 hours, with no water. Bromide was topped at 4,185 feet.

(Continued on Page 81)

JERGUSON

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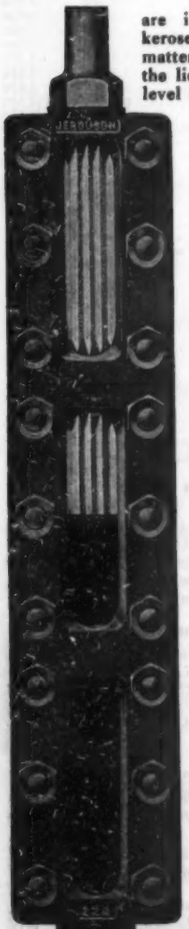

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Wildcat Operations in Oklahoma

(Continued from Preceding Page)

Dixie Oil Co., Inc.'s No. 1 Graham, SW SE SW Sec. 13-1-7.
Drlg. 150 ft.

Gillette & Kroeger's No. 1 Robbins, NE SE Sec. 31-1-4.
Rig on ground.

Gillette & Kroeger's No. 1 Duver, NW SE Sec. 36-1n-4e.
T.D. 784 ft.; S.D.

J. D. Sledge and Jack Lynch's No. 1-A (twin) Thompson, SW NE SW Sec. 1-1n-7e.
1,500 gals. acid; flowed 106 bbls. in 19 hrs.; Hunton top 3,330 ft.; T.D. 4,110 ft.

Southern Oil Corp.'s No. 1 Ladd, C NW NW Sec. 27-3-7.
Hunton lime 1,415-20 ft.; running 8-in. csg.

POTTAWATOMIE COUNTY

Blackgold Pet. Co.'s No. 1 Bissell, C NE NW Sec. 16-7-3.
Hunton 4,430 ft.; running 8-in. csg.; standardizing.

SEMINOLE COUNTY

Atlantic Oil Prod. Co. et al's No. 1-A Thompson (community test), SW SE SE Sec. 15-11-8.
Spudded.

Ray Dorris and J. T. Hall's No. 1 Dorris, SE SE SW Sec. 31-10-7.
Spudded.

Harris and Haun's No. 1 Harjo, NE SE NW Sec. 11-6-6 (O.W.P.B.).
P.B. to 2,115 ft.; H.F.W.; S.D.

Gypsy Oil Co.'s No. 1 Grayson, SW NW Sec. 13-6-5.
Drlg. 1,575 ft.

Verser & Clay et al's No. 1 Thomas, NE SE NW Sec. 1-6-4.
T.D. 2,422 ft.; S.D.

Wofford Drlg. Co. et al's No. 1 Abbott, NE cor. Sec. 33-8-7.
Rig.

Wofford Drlg. Co. et al's No. 1 Thomas, NW SE Sec. 8-6-7.
Rig on ground.

TEXAS COUNTY (PANHANDLE)

Ben F. Ash et al's No. 1 Guymon Townsite, C NE SE Sec. 30-3n-15e (Cimarron Meridian).
T.D. 2,430 ft.; fishing for drill pipe.

WASHITA COUNTY

Okla.-Midwestern Oil Co.'s No. 1 Dock, SW cor. Sec. 21-8-18w.
T.D. 2,430 ft.; lost tools in hole; rig rebuilt; S.D.

Anadarko Basin Oil Co.'s No. 1 Wolf, NE SW Sec. 33-9-17w.
Rigged up and S.D.

SOUTHERN OKLAHOMA

ATOKA COUNTY

Malernee et al's No. 1 D. O. K. Land Co., C SE SE Sec. 36-2s-13.
Drlg. 3,115 ft.

BRYAN COUNTY

Hankin & Williams' No. 1 Slagg, SE SW SE Sec. 20-6s-13e.
T.D. 503 ft.; S.D.

C. B. Welch's No. 1 Collins, SW cor. NE NE SE Sec. 19-5s-5e.
Machine.

CARTER COUNTY

Daphfine Oil Co.'s No. 1 Hooks, SE NW NW SE Sec. 5-1s-2w.
T.D. 2,281 ft.; P.B. to 2,150 ft.; recmtd. pipe; drlg. plugs.

CHOCTAW COUNTY

J. V. Scrivener et al's No. 1 Swink, C NE SE Sec. 25-4s-20e.
S.D. 810 ft.

COMANCHE COUNTY

F. P. Stevens' No. 1 Green, SE SW Sec. 2-1-13w.
T.D. 1,310 ft.; fishing.

Helden & Taylor's No. 1 Crutcher, C NE Sec. 11-1n-13w.
T.D. 863 ft.

JACKSON COUNTY

Burk Royalty Co.'s No. 1 Gore, SE NW SE Sec. 3-1s-20w.
Drlg. 1,909 ft.

Gypsy Oil Co.'s No. 1 Stokes, SE NW SW Sec. 11-1-20w.
Lime 1,709-11 ft.; T.D. 1,725 ft.; S.D.

Gypsy Oil Co.'s No. 1-A (Twin) Kelly, NE cor. Sec. 10-1n-20w.
P.B. to 1,424 ft. and S.D.

Gypsy Oil Co.'s No. 1-B Kelly (twin), 330 ft. S and 330 ft. W, SE cor. Sec. 10-1n-20w.
Oil sand 1,412-24 ft.; swbd. 68 bbls. of 43 grav. oil in 12 hrs.; S.D. for tankage.

Ben Russell et al's No. 1 Unknown, NW SE Sec. 30-1-22w.
Drlg. 5,520 ft.

JEFFERSON COUNTY

Geo. Pace et al's No. 1 Jack, NE NW NW Sec. 10-4s-4w.
Drlg. 2,963 ft.

H. F. Young et al's No. 1 Boulden, SE SW SW Sec. 1-7-4w.
Drlg. 2,583 ft.

JOHNSTON COUNTY

W. A. Delaney et al's No. 1 Diamond, NW NE SE Sec. 5-1s-8.
Standard rig up.

MARSHALL COUNTY

Paul Robb's No. 1 Vittetoe, C NE SE Sec. 11-5s-4e.
T.D. 4,943 ft.; recovered core barrel; S.D.

McCURTAIN COUNTY

J. V. Schrivener et al's No. 1, NE SW SW Sec. 34-6s-21.
Machine.

MURRAY COUNTY

Equitable O. & G. Co.'s No. 1 Scott, CSL N½ NW SW Sec. 15-1s-3.
Rigging up machine.

Manahan et al's No. 1 Ward, NE SE NW Sec. 13-1s-3 (Wilcox sand test).
Rigging up standard tools.

T. E. Revell et al's No. 1 Wolfe, NE cor. Sec. 18-1-3.
Sand 2,558-70 ft.; show of oil; T.D. 2,710 ft.; U.R. 5-in. csg. at 2,565 ft.

C. P. Williams et al's No. 1 Singleterry, SE SW NW Sec. 25-2s-3e.
T.D. 742 ft.; fishing for baller.

STEPHENS COUNTY

Wm. Angle's No. 1 Johnson, NE cor. SE Sec. 17-1n-8w.
Sand 2,225-30 ft.; drlg. 2,246 ft.

Dixie Oil Co., Inc.'s No. 1 Graham, SW SE SW Sec. 13-1n-7w.
Rig.

J. W. Madison's No. 1 Tussey, SW SE NW Sec. 24-1n-4w.
Rig down, drill pipe in hole; S.D. 2,320 ft.

Refinery Deliveries From Turner Valley Exceed Million Barrels This Year

By VICTOR LAURISTON
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Dec. 15.—Refinery deliveries from the Turner Valley Field in November totaled 76,518 bbls., compared with deliveries of 85,613 bbls. in October. This makes a total for the 11 months of 1934 of 1,061,781 bbls. In November, Imperial Oil Refineries, Ltd., took 68,477 bbls., compared with 75,415 bbls. in October; and Bell Refining Co. took 8,041 bbls. compared with 10,198 bbls. in October.

North Turner Valley

After a long period of inactivity, the North Turner Valley Field has two tests under way. John Phillips and associates of Calgary have spudded No. 1 test in LSD 16, Section 16-20-3w5, about a mile southwest of Model Oils' No. 1, in LSD 8, Section 22-20-3w5. It is considerably west of any well previously drilled in the North Turner Valley. Royalite Oil Co.'s No. 26, LSD 5, Section 23-20-3w5, offsetting Model's No. 1 about 800 feet southeast has derrick up and is moving equipment.

Carleton Producer

In Section 28-18-2w5, South Turner Valley, Carleton Royalties' No. 1, LSD 2, while still blowing considerable rotary water, showed around 125 bbls. a day of naphtha on its first test on the separator. It will likely make between 200 and 250 bbls. a day when the well is clear. The wet gas flow has been estimated at 12,000,000 feet, and there is an unusually heavy naphtha content. It finished 665 feet in the lime at 6,125 feet.

East of Carleton's No. 1, Spooner Oils' No. 5 Aanaconda, LSD 1, same section, is below 5,882 feet and 368 feet in the limestone, with wet gas flow estimated 3,000,000 feet a day. It has been taking around 40 bbls. a day of light crude between the casing while drilling. Anaconda Oil Co. holds a 10 per cent royalty interest in production. Spooner Oils, Ltd., has also agreed to drill an offset to Carleton Royalties' No. 2.

West of the Carleton producer, Renfrew Royalties' No. 1, LSD 3, same section, is below 4,020 feet and logging closely with adjacent producers. It will land 10-inch casing around 4,700 feet.

British Dominion Oil & Development Corp.'s No. 4, LSD 6, is in the Blairmore formation below 4,250 feet after getting additional gas at 4,100 feet.

Publix Oil & Gas Co.'s No. 1, LSD 8, same section, is putting equipment in shape after the fire, to resume from 4,899 feet. The Madison limestone is looked for around 4,950 feet. Director Royalties' No. 1, LSD 16, is below 4,910 feet.

South Turner Valley

In the far south end of the field, Northwest Royalties' No. 1, LSD 5, Section 21-18-2w5, is shut down at 2,110 feet. Union-Freehold Oil Corp.'s No. 1, LSD 8, same section, is below 4,690 feet.

On the east side, Merland Oil Co.'s No. 2, LSD 13, Section 27-18-2w5, is below 2,200 feet with 16-inch casing run to 1,800 feet and is logging closely with No. 1 producer. Livingston Syndicate's No. 1, LSD 5, Section 34-18-2w5, is below 3,070 feet. Nolan-Hungerford Royalties' No. 1, same LSD, is shut down at 3,257 feet.

Aldersyde Test

On the Aldersyde structure, east of Turner Valley, Ranchmen's Gas & Oil Co.'s No. 1, LSD 16, Section 13-20-28w4, has landed 5-inch casing at 6,263 feet and is cleaning out for a production test. It shows a lot of gas, and recent operations had to be carried on with from 4,100 to 6,200 feet of water in the hole to control the pressure. It may be deepened a little before testing production.

Tests in the Foothills

In the Forest Reserve area west of Olds, Hunter Valley Oil Co.'s No. 1 McLaren, LSD 12, Section 13-31-10w5, is in the Kootenay formation below 1,637 feet.

On the Highwood-Sinclair structure, south of Turner Valley, Canadian Royalties' No. 1 Banner, LSD 6, Section 34-17-3w5, is testing water shut-off at 625 feet.

In the old Oil City Field, Waterton Lakes Park, Oil City Royalties' No. 1, Section 30-1-30w4, is shut down for the winter at 2,138 feet, in a black lime formation.

On the Pekisko Hills structure south of Turner Valley, Pekisko Co.'s No. 1, LSD 6, Section 6-17-2w5, shut down for some weeks at 2,315 feet, has been blowing cuttings which plugged the line and built up considerable pressure. The company has secured 80 acres additional on the crest of the structure from Nordon Corp. and is negotiating with Highwood-Sarcee Oils, Ltd., for 160 acres. Arrangements are being made to finance completion of the test, which has already been drilled 1,244 feet in the lime.

Hudson Bay Junction

Dr. D. F. McDonald, of the geological staff of St. Francis Xavier University at Antigonish, Nova Scotia, has completed an examination of the recent oil discovery at Hudson Bay Junction in northern Saskatchewan, for a Regina group headed by A. G. MacKinnon. Details of this report have not been made public, but his general finding is to the effect that a wide area in northern Saskatchewan has distinct possibilities for oil and gas.

Vermilion Gas Test

In northeastern Alberta, Tenwell Oil & Gas Co.'s No. 1 is working on derrick. Location is on the R. R. Brennan farm about a mile west of Vermilion, and C. S. McFarlane has the contract. The company is seeking a natural gas franchise from the town of Vermilion, and is being financed by local capital.

Ontario Operations

In the Dawn Field, Lambton County, Ontario, Union Gas Co.'s No. 79, Lot 25, Concession 9, Dawn Township, is below 1,880 feet with a gas flow around 125,000 feet a day. It is deepening.

In the De Clute Field, Kent County, Union Gas Co.'s E. Lot 142, Talbot Road, Raleigh Township, is below 1,050 feet.

In the Tilbury Field, Kent County, Ladd & Ziegen's No. 2, Guy Mifflin farm, Lot 7, Concession 14, Tilbury East Township, has been located. No. 1, on the same property, finished some weeks ago with a shot production of 330,000 feet a day and 280 pounds rock pressure.

In Moore Township, Lambton County, American Engineering Co.'s No. 5, I. C. Kerr farm, Lot 21, Concession 1, north of No. 1 sulphur well, finished dry below 800 feet.

In the Eden gas field, on the Norfolk-Elgin County line, Charles Simpson and Associates' No. 1, Anderson farm, finished a dry hole around 1,300 feet.

In the eastern end of Norfolk County, No. 3 test drilled by Charles Simpson for the Walters Syndicate of Buffalo, finished around 1,200 feet with a gas flow estimated about 90,000 feet a day.

Producer Is Celebrated

An unique gathering took place at Calgary recently when Calgary Brokers, Ltd., celebrated the completion of three successive South Turner Valley producers —Sterling Royalties' No. 1, Century Royalties' No. 1 and Carleton Royalties' No. 1—by entertaining their oil field workers at the Renfrew Club. The three completions were in the course of a single year, and involved the drilling of some 18,000 feet of hole. Robert Wilkinson, president of Calgary Brokers, Ltd., presided, and speakers included Herbert Greenfield, president of the Oil and Gas Association of Alberta; and J. H. McLeod, president of the Royalite Oil Co.

Michigan Fields

(Continued from Page 61)

one in southeastern Michigan were issued during the period of December 5 to 12 by the state conservation department.

Two new locations were made in Porter Township, Midland County, the McHugh Ajax Oil Co.'s No. 1 J. and M. Rayner, SW NW NW Section 18-13n-1w, and Richard Hall's No. 3 Harris-Bond, NW NW SE Section 7, respectively. Daily Crude Oil Co. abandoned Montcalm County for the present to drill a test on the Joseph Martin lease, south 50 acres, NW Section 28-13n-1e, Mount Haley Township, Midland County.

Golden Oil Co. took out a permit for its No. 1 A. Steffenson, SW SW SE Section 5-10n-8w, Montcalm Township and County, near Greenville.

John F. Melvin was granted a permit for his No. 1 Fred DeStoop, SE SE NE Section 2-14n-3w, Chippewa Township, Isabella County.

The new southeastern Michigan test is C. M. Holley's No. 1 Irving, Grace L. and Mary Thom, SW NE NE Section 9-8n-9e, Oregon Township, Lapeer County, where considerable drilling activity has been centered and several small producers have been brought in during the past year.

It was reported a rig has been built southwest of Grayling and 10 miles northwest of the Black Diamond Petroleum Syndicate's new test in Section 28, Lyon Township, Roscommon County.

It was also reported a gas test will be drilled on a Pure Oil Co. lease in Section 15-13n-5w, Fremont Township, near Winn.

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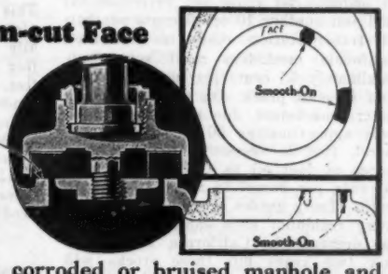

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N. R. A. Code Held Unenforcible in California; Increased Development Causing Some Concern

By L. P. STOCKMAN
Staff Correspondent, California Fields

LOS ANGELES, Calif., Dec. 17.—Is California intensifying the State's curtailment program by its relatively high rate of development or are drilling operations, which have been increasing from month to month since the first of the current year, necessary in order to keep pace with the anticipated consumptive demand during 1935? This is a question that well informed oil men are asking themselves as they view the ever-increasing potential production of California which continues to mount each week due to the completion of numerous prolific new wells in various fields of the State.

Progressive development of new fields is recognized as a necessity because of offset requirements and in order to secure a fair producible allotment but, with few exceptions, it is rather difficult to justify drilling operations in several proven fields. Drilling operations are necessary in the Mountain View and Edison Fields of Kern County because they are still in the formative stage and likewise at Dominguez, Santa Fe Springs, Inglewood and Playa Del Rey where deeper zones are being developed because of lease obligations or where the productive area has recently been extended.

The present scope of work might be justified if California were assured that it would find it economically possible to continue shipments of fuel oil to the Atlantic Coast for domestic consumption, even though this is not especially remunerative. With heavy unrefinable crude oil bringing 55 cents per barrel in the field and another 10 or 15 cents per barrel transportation costs to tidewater, California marketers must secure approximately 75 cents per barrel to show even a small profit. On the other hand, eastern marketers, due to transportation costs approximating 50 to 60 cents per barrel, find it necessary to make purchases of fuel oil in California around 65 cents per barrel to net even a small profit. Heavy grades of crude oil and refinery residuum have shown a substantial decrease in California during the past two years but these stocks will again begin moving upward if intercoastal shipments are discontinued. Shipments of fuel oil to Japan have been increasing during the past few months and should continue at a relatively high level for some time to come. This market can only absorb a part of the supply, however, and hence California marketers are hoping that prices on the Eastern Seaboard will be high enough to justify additional commitments during 1935.

Oil Code Unenforcible

Superior Judge Emmet H. Wilson threw a bombshell in the camp of conservationists and adherents of curtailment when he handed down a decision that the NRA code of fair competition for the petroleum industry is not enforcible in California. Judge Wilson's decision was given in deciding the status of a petition of Robert L. Cox and Gus S. Riley for the removal of Hooper C. Dunbar, Gordon B. Morris and Craig C. Harris as trustees of the Bell View Oil Syndicate, a common law trust operating in the Santa Fe Springs Field of Los Angeles Basin. Judge Wilson also held that, "constitutional guarantees are not suspended by the existence of war, panic or financial emergencies."

The complaint charged that the trustees had produced oil in excess of the amount prescribed by the oil umpire and for this reason major companies had refused to purchase it. The plaintiffs argued that the petroleum code and NRA are Federal regulations which the defendants were required to obey but Judge Wilson pointed out that Congress has no authority to regulate the internal affairs of states and can only interfere in interstate and foreign trade. It was further contended that the code has the force of law because it had been adopted by the California legislature in 1933 but the court declared that under the state constitution all legislative power is vested solely in the legislature but that the legislature delegated its powers to the President and failed to fix a standard for control of administrative rules and regulations.

Big Wells

The current week saw another deluge of new wells and a relatively high aggregate initial daily production due to the completion of prolific producers in the Kettleman North Dome and North Belridge Fields. In addition to these exceptionally large wells, operators also finished some excellent producers in the Mountain View, Edison, Santa Barbara Mesa and Fruitvale Fields during the week. The present scope of work indicates the probability that numerous completions will be chalked up between now and the close of the year.

The Standard Oil Co. headed the completion list this week by finishing a new well in the Kettleman North Dome Field that registered an initial of more than 1 bbl. of oil for each foot of hole drilled. This was the company's No. 78-19-J, completed flowing 10,040 bbls. of exceptionally clean 35 gravity oil and 13,100,000 feet of natural gas per day from 8,631 feet. This new well has 9⅝-inch casing landed and cemented at 7,767 feet, a string of 7-inch landed at 8,630 feet and a 4¾-inch flow string at 7,776 feet. The 7-inch is perforated at 7,777-7,922 feet, 8,015-8,200 feet and at 8,324-8,630 feet. There are several additional potential producers nearing completion in the North Dome and judging by their present status we may anticipate another completion or two before the close of 1934.

Drilling to Continue

It is quite evident from the present amount of drilling that this field will continue to occupy a prominent place in the spotlight during 1935 especially since both the Standard and Kenda are pursuing an aggressive development program. The Union is expected to conclude its drilling program in this field early in January as its eighth and final permissible well on the Amerada-King lease is rotating ahead slightly below 6,600 feet. Just at present, drilling operations in the field have dwindled down to relatively few operations as Associated Oil Co. has only one incompleted drilling well to its credit, Union Oil Co. two wells; Petroleum Securities, one well, and the balance spread out between Kenda and the Standard Oil Co. In addition to its final well on the Amerada-King lease, the Union is working on No. 1 Lillis-Welsh, an outpost in the extreme western end of the field, but the possibility of completing this project appears quite remote due to a complicated fishing job with which the company is confronted.

In the Kettleman Middle Dome Field, the Standard Oil Co. is making preparations to begin drilling operations on No. 38-29-V which will be located about 1,000 feet southeast of the company's first producer, No. 6-29-V. These wells after they have liquidated drilling costs, will revert to the Middle Dome Corp. which operator has organized to carry on development work in lieu of unit development as has been done in the North Dome. The South Dome of Kettleman Hills, which has been dormant since the Ohio Oil Co. got a salt water well a few years ago, will be back in the picture again early in 1935 as Continental Oil Co. is making preparations to drill a deep test on the Gatchell permit in Section 7-25-20. Continental's projected test is located in the Kettleman plains at the base of the hills and may bear watching as it has considerable merit.

Lost Hills-Belridge

Continental Oil Co. successfully completed an unusually large well in the North Belridge Field of Kern County when No. 5 Result in Section 36-27-20, was brought in flowing 5,038 bbls. of clean 35.1 gravity oil and 30,000,000 feet of natural gas initially from 8,395 feet. On a two-hour flow test, this new well produced at the rate of 8,744 bbls. per day with the greatest of ease. The company started to bean the well down within a few days following completion in order to conform with curtailment. The Union Oil Co. has not yet succeeded in recovering the fish which has retarded completion of No. 18 Belridge and from present indications it will be some time next year before it can be cleaned out and prepared for a test. Drilling operations were concluded on this well several months ago and the hole was being reamed out preparatory to completion when a twist-off left several stands of drill pipe and a reamer in the hole. Subsequently some wash pipe was lost and for a time the situation looked hopeless. No. 18 Belridge is bottomed at 8,523 feet and showed up so good that the crew expected to complete it flowing at least 10,000 bbls. per day.

The Belridge Oil Co.'s deep test, No. 16-35, in Section 35-27-20, came in wet early in the week and the flow was consequently killed within a short time. This well, bottomed at 8,905 feet, was brought in doing 5,000 bbls. of hot salt water. The Ohio Oil Co. has killed its No. 1 Bloemer, an Eocene completion in Section 36-27-20, preparatory to deepening it. This well was finished about a year or so ago and has been on production ever since although it was only given a small allowable. The Standard Oil Co. is building rig for a deep test to be drilled in Section 2-26-20, in the Lost Hills area and spud should be made early in the new year. This projected test is located at the extreme western end of the Lost Hills Field and is not far removed from an unsuccessful attempt to develop production by the Associated Oil Co. in conjunction with a group of other operators about a year or so ago.

Santa Barbara

The Santa Barbara Mesa Field yielded two more good wells during the current week and both showed commercial production. This field is still quite active and, like many other areas, drilling operations will extend well over into 1935. The new wells chalked up this week were Rio Grande's No. 2 Perkins and the Ramona Oil Co.'s No. 1 Gale. The former, finished at 2,061 feet with a 5¾-inch water string landed and cemented at 2,028 feet, was completed flowing 1,660 bbls. of 21.9 gravity oil per day while the latter was brought in doing 560 bbls. of very clean 20.9 gravity oil per day following completion at 2,065 feet with the 6⅝-inch water string landed at 2,012 feet. The Rio Grande is developing its property in a normal manner as the Perkins lease containing 40 acres extends from the ocean front to Cliff Drive. Operators in this field are now confronted with the necessity of formulating a program to take care of waste water disposal but no difficulty is expected along this line if the sponsors keep expenditures in line as oper-

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	December 2		November 25			
Intercoastal-domestic—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Fuel oil	129,967	18,567	134,987	19,284	11,805,297	4,121,547
Diesel and gas oil	78,351	11,197	.....	.....	1,423,264	1,227,043
Gasoline	297,607	42,515	153,573	21,939	7,684,296	10,185,159
Kerosene	198,060	28,437	.....	.....	1,175,639	906,294
Asphalt	.....	.....	.....	.....	70,019	12,179
Other finished oil	.....	.....	.....	.....	54,778	90,557
Other unfinished oil	.....	.....	.....	.....	.....	72,584
Foreign exports—						
Crude oil	291,034	41,576	140,129	20,018	7,692,088	6,949,353
Fuel oil	390,416	55,631	179,022	25,575	12,369,642	7,422,872
Diesel and gas oil	147,660	21,094	90,489	12,927	3,824,850	3,288,855
Gasoline	215,203	30,743	78,598	11,228	4,533,920	5,231,150
Kerosene	56,051	8,007	.....	.....	1,645,569	1,326,397
Other finished oil	.....	.....	.....	.....	37,955	12,086
Other unfinished oil	75,383	10,769	.....	.....	230,745	66,275
Coastwise-domestic—						
Crude oil	65,406	9,344	244,543	34,935	7,428,376	6,100,392
Fuel oil	134,427	17,775	211,823	30,260	8,860,057	9,863,024
Diesel and gas oil	221,114	31,588	3,961	566	694,004	957,245
Gasoline	153,063	21,866	387,730	55,390	13,020,544	11,702,867
Kerosene	6,960	944	7,747	1,107	298,773	182,139
Naphtha distillates	.....	.....	.....	.....	.....	27,651

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Fuel oil	.....	.....	.....	.....	110,650	.....
Diesel and gas oil	.....	.....	76,150	10,879	675,775	619,539
Gasoline	70,660	10,094	.....	.....	425,943	504,548
Kerosene	.....	.....	.....	.....	276,593	482,430
Lubricants	.....	.....	5,419	774	52,112	41,339
Foreign exports—						
Crude oil	.....	.....	17,007	2,430	1,778,601	1,696,661
Fuel oil	20,988	2,998	135,735	17,962	2,064,747	1,795,331
Diesel and gas oil	.....	.....	10,880	1,554	1,174,952	947,740
Gasoline	22,559	3,223	5,273	753	2,723,741	3,657,056
Kerosene	36,546	5,221	.....	.....	1,044,769	982,000
Lubricants	.....	.....	3,483	498	167,740	127,513
Other finished oil	.....	.....	.....	.....	2,760	3,745
Other unfinished oil	.....	.....	.....	.....	5,750	26,278
Coastwise-domestic—						
Fuel oil	32,946	4,709	96,072	13,725	4,946,668	3,688,614
Diesel and gas oil	.....	.....	.....	.....	119,036	274,745
Gasoline	143,133	20,448	203,365	29,052	5,308,339	4,184,011
Kerosene	.....	.....	.....	.....	82,434	114,138

ators recognize the necessity of preventing pollution of the adjacent ocean waters.

The Mammoth Oil Co., headed by Ed McAdams, has obtained a lease on 585 acres of potential oil land in the Capitan Field, located about 15 or 20 miles west of the Santa Barbara Mesa Field, and it is the present intention to start a new well shortly after the new year rolls around. Up to the present, only the General Petroleum and Shell have developed commercial production in this field which seems rather spotty but the new company is generally conceded to have a good chance of getting production. It is quite likely that the Mammoth Oil Co. may delay drilling at Capitan pending developments in the Playa Del Rey Field of Los Angeles Basin where the company holds a piece of acreage that is so close to production that it is definitely proved up.

In the Goleta Field which produces natural gas exclusively, the Standard Oil Co. made a formation test of No. 2 Chase and Bryce but the result was not satisfactory as it showed some gas cut mud and salt water, the latter containing 1,150 grains of salt per gallon. The Venture Avenue Field had its first fire a week or so ago when the Property Service Corp.'s No. 3 Dabney in the extreme eastern end of the field blew out while the crew was bailing and subsequently became ignited. The bailer blew out of the hole and it is believed that contact with the crown block or derrick resulted in a spark that ignited the accompanying gas. Fortunately the well bridged over within a short time and less than three hours later the well was dead. In the Sespe district of Ventura County, the Merchants Petroleum Co. recompleted its well, No. 4, after cleaning out the hole and this well was returned to production pumping 541 bbls. of clean 22.1 gravity oil per day from 1,604 feet.

Mountain View

The Mountain View district of Kern County, located approximately 15 miles southeast of Bakersfield, has taken on the aspect of a real oil field and extension work in the western end indicates the probability that the limits of production are far from being determined. Two new wells were successfully finished in this field during the current week and indications point to additional completions within the next fortnight. The Texas Co. finished its third producing well on the Mateo Smith property when No. 4 was brought in flowing 2,429 bbls. of clean 31.5 gravity oil per day from 5,412 feet after the hole had been completed with an 8⅝-inch water string landed and cemented at 5,361 feet and a 6⅝-inch liner carrying 63 feet of perforated. No. 2 Nance of the A. T. Jergins Trust was good for 844 bbls. of 28.5 gravity oil and 1,340,000 feet of natural gas upon completion at 5,699 feet with an 8⅝-inch water string landed and cemented at 5,415 feet and a 4½-inch liner including 274 feet of perforated.

The Edison Field, located a few miles east of Mountain View also yielded two new wells during the present week. The General Petroleum finished its first commercial producer in this area when No. 1 Leddy was brought in doing 678 bbls. of 21.5 gravity oil cutting 5 per cent from 2,885 feet after the hole had been plugged back from 3,046 feet. The North American also entered the list of successful operators for the first time when No. 1 Ryan was finished pumping 296 bbls. of 18.1 gravity oil cutting 8 per cent from 1,651 feet. The Edison Field, after a period of uncertainty has taken a new lease on life and while drilling operations must be restricted until some degree of conformity is determined and the limits of production decided there is ample room for development if operators can justify additional drilling.

Fruitvale

The Western Gulf Oil Co. made up for lost time this week by finishing two new wells in the Fruitvale Field of Kern County and both of them registered commercial production. On K. C. L. Lease B, the company successfully completed well No. 15 at 3,935 feet with an 8⅝-inch water string landed and cemented at 3,592 feet and a 6⅝-inch liner carrying 340 feet of perforated. This new well showed a potential daily production of 465 bbls. of 22.9 gravity oil which centrifuge tests indicated was exceptionally clean. The Western Gulf's No. 4 Price-Stewart was somewhat smaller although the initial, 260 bbls. of clean 21.9 gravity oil, was satisfactory as the hole had been finished at 3,668 feet and completed with an 8⅝-inch water string landed at 3,592 feet and a 6⅝-inch liner carrying 83 feet of perforated. The Western Gulf, immediately upon completion of well No. 15 on K. S. L. Lease B, started rig construction for well No. 16 and this project should get under way within the next 10 days.

In the Mount Poso Field of Kern County, the Shell Oil Co. added a new well to its list of producers by completing No. 2 Matthews fee pumping 171 bbls. of clean 16.7 gravity oil per day from 1,771 feet. The Union Oil Co. with four rigs erected on the S. & M. property has just spudded in No. 17 and has staked location for No. 21 in Section 4-27-28. Drilling operations in this field are not being pushed, however, although both the Union and Shell have been progressively developing their respective properties for the past several months. In the Round Mountain Field, the Honolulu Oil Co. has concluded drilling operations on No. 75 in Section 18-28-29, and this well should be on production some time within the next few days.

Playa Del Rey

Drilling operations in the eastern end of the Playa Del Rey Field of Los Angeles Basin where Charles W. Fourl finished a large flowing well a short time ago are not being prosecuted with as much speed as some of the operators would like and it may be another several weeks before the parade starts. Big Ben Oil Co. and Charles W. Fourl, due to the fact that they hold acreage, are able to proceed with normal development. The Union Oil Co. has just spudded in No. 6 Vidor, an offset to Fourl's recent completion, but it will be another several weeks before the pay is reached. Mayor Shaw has signed the ordinance adopted by the city council which permits drilling operations on 850 acres southeast of Playa Del Rey and the Continental Oil Co. will therefore be able to proceed with development work at the expiration of 30 days.

In the Long Beach Field, the Medal Oil Co. has completed No. 1 Cox flowing 200 bbls. of 23.9 gravity oil per day by heads but it is quite probable that the well will be given artificial stimulation shortly as installation of pumping equipment should substantially increase production. This new well was bottomed at 4,810 feet but subsequently plugged back to 4,460 feet. The Rayfair Oil Co. cleaned out its No. 1 Signal and returned it to production pumping 60 bbls. of 24.1 gravity oil per day from 3,989 feet. The Shell has recompleted No. 16 Slusher in the Santa Fe Springs Field and the well has been returned to production pumping 148 bbls. of 32.9 gravity oil per day after the hole had been plugged back from 7,900 feet to 4,510 feet.

LEGAL

Department of the Interior, U. S. Land Office, Las Cruces, New Mexico. Notice is hereby given that Balsh Field Unit W½, W½ SE¼ Sec. 15, T. 17 S., R. 32 E., N.M.P.M., and Eaves Field Unit W½ W½ Sec. 24, W½ NW¼, SE¼ NW¼ Sec. 25, T. 26 S., R. 36 E., N.M.P.M., New Mexico, are offered to the qualified bidder of the highest amount offered per acre as a bonus for the privilege of leasing the land under section 17 of the act of February 25, 1920 (41 Stat. 437), at the customary royalty scale in the standard lease form, at the sale to be held in the United States Land Office in Las Cruces at 10: A.M., on January 14, 1935. Any lease issued will be subject to the regulations governing the sale of leases approved September 22, 1933, and to compliance with the Code of Fair Competition for the Petroleum Industry as signed by the President on August 19, 1933, and any modifications thereto heretofore or hereafter made, and to abide by the provisions of any act of Congress heretofore or hereafter enacted, or any code or regulatory measure adopted by authority thereof, for the regulation or control of the petroleum industry. The successful bidder must deposit on the date of the sale with the officer in charge of the sale a certified check on a solvent bank, or cash, for one-fifth of the amount bid by him and file the showing of qualifications to receive a lease required by section 15 of the said regulations. Bidders are warned against violations of the provisions of section 59 U. S. Criminal Code, approved March 4, 1909, prohibiting unlawful combination or intimidation of bidders. The right is reserved to reject any and all bids in the discretion of the Secretary of the Interior. (Signed) Paul A. Beach, Register.

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S-T-R	Depth	Status
General Pet. Co., No. 11 Capitan, Santa Barbara Co.	32- 5-30	2,600	cleaning out
Shell Oil Co., No. 2 Capitan, Santa Barbara Co.	32- 5-30	3,199	cmtd.
Shell Oil Co., No. 3 Capitan, Santa Barbara Co.	5- 4-30	1,293	hd. sh. drlg.
Royalty Serv. Corp., No. 1 Los Alamos, Santa Barbara Co.	35- 9-32	4,500	suspended
Union Oil Co., No. 3 Santa Maria, Santa Barbara Co.	35-10-34	3,100	sd. sh. drlg.
York-Smullin, No. 2 Lompoc, Santa Barbara Co.	33- 8-34	....	rigging up
Barnsdall-Rio Grande, No. 8 Doty Elwood, Santa Barbara	15- 4-29	5,732	redrlg. 2,323
East Elwood Pet., No. 1 Elwood, Santa Barbara Co.	14- 4-29	3,677	reaming
Shell Oil Co., No. 1 Goleta, Santa Barbara Co.	20- 4-28	5,453	rd. sd. drlg.
Standard Oil Co., No. 2 Goleta, Santa Barbara Co.	17- 4-28	4,850	redrlg. 4,715
Ortega Oil Co., No. 1 Summerland, Santa Barbara Co.	16- 4-26	4,583	cleaning out
Woodrow Pet., No. 1 Rincon, Ventura Co.	4- 3-24	7,612	suspended
General Pet. Co., No. 4 Rincon, Ventura Co.	tideland	....	bldg. pier
Continental, No. 3 San Miguelito, Ventura Co.	23- 3-24	7,015	recmtd.
Las Posas Pet., No. 1 Las Posas, Ventura Co.	22- 3-20	7,370	fishing
Fisher, Daniel, No. 1 South Mountain, Ventura Co.	5- 3-19	765	suspended
The Texas Co., No. 128South Mountain, Ventura Co.	4- 3-19	5,430	D.P. stuck
Oil Ridge Oil Co., No. 1 Fillmore, Ventura Co.	1- 4-19	1,408	reaming
Bolsa Chica Oil Co., No. 2 Piru, Ventura Co.	4- 4-18	461	suspended
Piru Oil Co., No. 1 Piru, Ventura Co.	14- 4-18	3,545	suspended
Dawson Oil Co., No. 1 Simi, Ventura Co.	5- 2-17	1,876	gr. sd. drlg.
Rancho Oil, Inc., No. 1 Ojai, Ventura Co.	18- 4-23	2,525	testing
Continental Oil Co., No. 1 Ojai, Ventura Co.	13- 4-23	1,089	hd. sh. drlg.
Prop. Service Corp., No. 1 Lloyd, Ventura Co.	24- 3-23	7,194	P.B. 7,110
Mosher, J. W., No. 1 Santa Paula, Ventura Co.	22- 4-21	2,300	reaming
Standard Oil Co., No. 1 Lost Hills, Kern Co.	2-26-20	....	location
Casa Mira Oil Co., No. 1 Belridge, Kern Co.	29-28-20	6,504	cmtd.
General Pet., No. 1 South Belridge, Kern Co.	30-28-21	11,377	suspended
Ohio Oil Co., No. 1 North Belridge, Kern Co.	36-27-20	8,525	r.u. to dpn.
Union Oil Co., No. 18 North Belridge, Kern Co.	36-27-20	8,523	redrlg. 8,380
Standard Oil Co., No. 1-A North Beiridge, Kern Co.	36-27-20	5,039	sd. sh. drlg.
Amerada Pet., No. 1 Blackwells Corner, Kern Co.	17-26-19	3,751	br. sh. drlg.
Cimarron Oil Co., No. 1 Delano, Kern Co.	14-25-27	1,475	sd. sh. drlg.
Standard Oil Co., No. 1 Delano, Kern Co.	1-25-23	....	grading
Trico Oil & Gas Co., No. 1 Alpaugh, Kern Co.	3-25-23	2,480	gas—shut in
Pell Oil Co., No. 1 McVan, Kern Co.	14-27-27	1,593	suspended
Buckeye Union Oil Co., No. 1 McVan, Kern Co.	11-27-27	1,169	prod. test
Hancock Oil Co., No. 2 Mountain View, Kern Co.	14-30-28	4,798	sd. sh. drlg.
Associated Oil Co., No. 1 Mountain View, Kern Co.	3-31-29	4,572	sd. sh. drlg.
Associated Oil Co., No. 2 Mountain View, Kern Co.	14-30-28	5,286	suspended
Union Oil Co., No. 6 Mountain View, Kern Co.	9-30-28	....	rigging up
Union Oil Co., No. 4 Mountain View, Kern Co.	15-30-28	5,525	cmtd.
Union Oil Co., No. 5 Mountain View, Kern Co.	15-30-28	4,650	sd. sh. drlg.
General Pet., No. 3 Mountain View, Kern Co.	14-30-28	....	bldg. rig
The Texas Co., No. 4 Mountain View, Kern Co.	14-30-28	3,043	suspended
Barnsdall, No. 3 Mountain View, Kern Co.	31-30-29	6,130	sd. sh. drlg.
Hogan Pet., No. 6 Mountain View, Kern Co.	4-31-29	3,208	sd. sh. drlg.
Standard Oil Co., No. 4 Mountain View, Kern Co.	23-30-28	3,651	sd. sh. drlg.
National Oil Co., No. 1 Mountain View, Kern Co.	30-30-29	5,604	redrlg. 3,713
Gilmore-Snyder Oil Co., No. 2 Mountain View, Kern Co.	24-30-28	2,715	sd. sh. drlg.
Gilco, Inc., No. 2 Edison, Kern Co.	23-30-20	2,110	fishing
Jergins Trust, No. 3 Edison, Kern Co.	14-30-29	1,560	prod. test
Jergins Trust, No. 4 Edison, Kern Co.	24-30-29	....	rig, suspended
Consd. Crude Oil Co., No. 1 Edison, Kern Co.	17-30-29	1,592	sd. sh. drlg.
Shell Oil Co., No. 1 Edison, Kern Co.	16-30-29	4,276	suspended
Shell Oil Co., No. 2 Edison, Kern Co.	15-30-29	3,062	sd. sh. drlg.
Monterey Expl. Co., No. 4 Edison, Kern Co.	15-30-29	2,830	sd. sh. drlg.
The Texas Co., No. 1 Edison, Kern Co.	4-30-29	2,762	sd. sh. drlg.
Mitchell-McMillan, No. 1 Edison, Kern Co.	8-30-29	208	sd. drlg.
North American, No. 1 Edison, Kern Co.	14-30-29	1,654	pump. 250 b.d.
General Pet., No. 1 Edison, Kern Co.	14-30-29	2,886	650 b.d.
General Pet., No. 2 Edison, Kern Co.	15-30-29	2,310	sd. sh. drlg.
Surety Oil Co., No. 1 Edison, Kern Co.	32-29-29	....	rig, suspended
Signal Oil & Gas Co., No. 1 Edison, Kern Co.	31-29-30	916	sd. sh. drlg.
Caravel Pet., No. 1 Sivert, Kern Co.	19-30-30	1,925	suspended
Sea Cliff Oil Co., No. 1 Greenfield, Kern Co.	7-31-28	131	tech. spud.
Tejon Ridge Oil Co., No. 1 Comanche, Kern Co.	23-32-29	1,500	sd. sh. drlg.
Standard Oil Co., No. 1 Semi-Tropic, Kern Co.	8-27-28	....	rigged up
101 Oil Co., No. 1 Elk Hills, Kern Co.	5-30-24	....	rig, suspended
Richfield Oil Co., No. 2 Devil's Den, Kern Co.	14-25-18	196	sd. sh. drlg.
The Texas Co., No. 1 Temblor, Kern Co.	29-29-21	862	sd. sh. drlg.
Shell Oil Co., No. 1 Buena Vista, Kern Co.	9-32-25	....	bldg. rig
Reserve Oil & Gas Co., No. 1 Tejon, Kern Co.	2-10-19	....	material
Badger Oil Co., No. 1 Tejon, Kern Co.	31-11-19	6,248	cleaning out
Russ Oil Synd., No. 1 Dos Palos, Fresno Co.	28-12-11	4,514	suspended
Bergman, Harry, No. 1 Dos Palos, Fresno Co.	13-12-11	6,138	suspended
Union Oil Co., No. 1 Lillis-Kettleman, Fresno Co.	24-21-16	10,944	redrlg. 8,414
K. N. D. A., No. 56 Kettleman, Kings Co.	8-22-18	10,154	redrlg. 9,474
The Texas Co., No. 1 Coalinga, Fresno Co.	35-20-14	1,040	sd. sh. drlg.
Western Gulf, No. 2 S. P., Fresno Co.	11-17-15	7,264	sd. sh. drlg.
Farrell Pet., Well No. 1, San Luis Obispo Co.	18-31-12	1,432	hd. sh. drlg.
Willett Oil Co., No. 1 Cholame, San Luis Obispo Co.	10-25-15	3,605	sd. sh. drlg.
Commonwealth Consd. Gas Co., No. 1 Tulare Lake, Kings	21-22-20	2,490	gas—shut in
Commonwealth Consd. Gas Co., No. 3 Tulare Lake, Kings	21-22-20	....	rig, suspended
Kettleman Pac. Oil Co., No. 1 Tulare Lake, Kings Co.	11-23-16	812	sd. sh. drlg.
General Pet., No. 1 Devil's Den, Kings Co.	20-24-18	....	rig, suspended
Buttes Oilfields Co., No. 2 Marysville, Sutter Co.	35-16- 1	6,398	hd. sh. drlg.
Milham Exploration Co., No. 3 Tracy, San Joaquin Co.	24- 3- 4	3,741	sd. sh. drlg.
Pure Oil Co., No. 1 Chowchilla, Madera Co.	7-10-14	8,220	P.B. 7,150
Northern Counties Pet., No. 1 Tehama, Tehama Co.	25-24- 3	2,031	hd. sh. drlg.
The Texas Co., No. 1 Petrolia, Humboldt Co.	1- 3- 2	616	sd. sh. drlg.

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S-T-R	Depth	Status
Speik, F. A., No. 1 Athens, Los Angeles Co.	2- 3-14	....	rigged up
Houser, G. W., No. 1 Athens, Los Angeles Co.	18- 3-14	4,037	cleaning out
Macrate, A. N., No. 1 Athens, Los Angeles Co.	18- 3-14	4,156	redrlg.
Wilshire Oil Co., No. 3 Potrero Deep, Los Angeles Co.	27- 3-14	7,995	recmtd.
Madison Oil Co., No. 1 Del Rey, Los Angeles Co.	27- 2-15	....	bldg. rig
Fourl, C. W., No. 2 Del Rey, Los Angeles Co.	27- 2-15	....	bldg. rig
Union Oil Co., No. 6 Del Rey, Los Angeles Co.	27- 2-15	512	sd. drlg.
Big Ben Oil Co., No. 1 Del Rey, Los Angeles Co.	27- 2-15	3,031	sd. sh. drlg.
Staple Oil Co., No. 1 Manhattan, Los Angeles Co.	24- 2-15	5,503	sd. sh. drlg.
Marble, Willard, No. 1 Chatsworth, Los Angeles Co.	6- 2-16	1,985	cleaning out
Rex Anglin Dev. Co., No. 1 Los Nietos, Los Angeles Co.	29- 2-11	1,138	suspended
Partridge & Chambers, No. 1 Whittier, Los Angeles Co.	62- 2-11	....	location
Standard Oil Co., No. 1 Montebello Deep, Los Angeles Co.	6- 2-11	8,321	plug. 3,500
Universal Consd., No. 4 Montebello Deep, Los Angeles Co.	6- 2-11	1,798	sd. sh. drlg.
Shively, N. O., No. 1 Puente Hills, Los Angeles Co.	23- 2-11	2,098	sd. sh. drlg.
Deep Rock Oil Co., No. 1 Puente Hills, Los Angeles Co.	23- 2-10	2,524	50 b.d.
Pressel & Tull, No. 1 Puente Hills, Los Angeles Co.	30- 2- 9	4,139	br. sh. drlg.
International Dev. Co., No. 1 Saugus, Los Angeles Co.	34- 5-16	3,350	cleaning out
Barstow Oil Co., No. 1 Castaic, Los Angeles Co.	35- 5-16	2,867	sd. sh. drlg.
Black Eagle Oil Co., No. 1 Huntington, Orange Co.	tideland	4,702	cmtd.
Explorers Drilling Co., No. 1 Fairview, Orange Co.	9- 6-10	945	suspended
Nuell Co., No. 1 Newport, Orange Co.	29- 6-10	6,485	fish D.P.
B. & B. Oil Co., No. 1 Newport, Orange Co.	19- 6-10	2,786	sd. sh. drlg.
Great American Pet. Co., No. 2 East Coyote, Orange Co.	19- 3- 9	2,000	suspended
Great American Pet. Co., No. 1 Chino, San Bernardino Co.	18- 2- 8	3,462	suspended
Great American Pet. Co., No. 3 Chino, San Bernardino Co.	7- 2- 8	313	suspended
Tehama Pet., No. 1 Santa Ana Canyon, San Bernardino	33- 2- 8	2,698	cleaning out
San Diego Pet. Co., No. 1 Chula Vista, San Diego Co.	22-18- 2	4,328	hd. sd. drlg.
Edmonds, E. A., No. 1 Trustee, San Diego Co.	29-15- 2	2,431	hd. sd. drlg.
Everts Drlg. Co., No. 1 Camp Kearney, San Diego Co.	23-15- 3	1,147	dry—abd.
Great Coastal Oil Co., No. 1 Elsinore, Riverside Co.	36- 5- 5	483	hd. sd. drlg.

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Activity Stimulated in South Arkansas Through Discovery of New Shallow Producing Area

By J. R. CRUMPTON
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Dec. 17.—The discovery of a new shallow producing area in South Arkansas along with continued activity in the Rainbow Field in that district featured the week's activity in this division. The North Louisiana district reported five gas wells out of a total of nine completions, only one small pumping oil well being in the completion list. An important deep wildcat test in South Arkansas was abandoned as dry, and another in North Louisiana is coring below 5,000 feet with no tangible results to date.

SOUTH ARKANSAS

Four miles west of Camden in Ouachita County, T. J. Gaughan's No. 1 M. Bragg, Section 25-13-18, is waiting for standard rig to pump with 150 feet of 15.8 gravity oil in the hole. Total depth is 1,394 feet in the Nacatoch horizon. Seven-inch casing was set on top of the sand at 1,380 feet. The new producing area is about midway between the Smackover and Waterloo Fields, and considerable trading in leases has followed the new strike with a number of new tests expected to be spudded in immediately.

The Rainbow Field is experiencing various results from the new producing horizons in the lower red bed series. A number of wells now drilling have encountered pay sands both deeper and at a lesser depth than the discovery well. H. L. Hunt, Inc.'s No. 11 E. F. Gregory, Section 10-17-14, showed 660 feet of oil on drill stem test in 11 minutes from 3,286-96 feet with oil sand cored from 3,291-96 feet. Seven-inch casing was set at 3,287 feet, and since that time the test is reported to have cored another pay sand 20 feet below the depth given above. This was done when it was decided to core to the 3,360-foot level of the discovery well, but since encountering the new sand around the 3,315-foot level, which proved to be one of the richest of any streak encountered so far, the operators will use perforated pipe in an effort to get production from both horizons.

The S. H. A. Oil Co.'s No. 2 Taylor, Section 10-17-14, an offset to the discovery well, tested 2,600 feet of oil and 600 feet of salt water on drill stem test in 24 minutes from 3,466-68 feet. Seven-inch casing has been set at 3,467 feet. The pay sand in this well is practically 100 feet deeper than in the first well drilled to this horizon, and was contacted following a week of coring during which time several other good looking sands were encountered.

Nearing Pay Horizon

A number of other wells are nearing the pay zone in the Rainbow Field and will be tested in one or more of the various sands during the coming week. The results of the week's drilling in this area discloses that from two to three paying stratums of sand will produce, depending upon what part of the structure the well is located. The field will be more or less spotted as far as any one particular pay zone is concerned, but the whole area should furnish producers consistently from some of the horizons.

One mile north of the discovery well, Jovian Oil Co.'s No. 1 W. H. Perdue, Section 3-17-14, is temporarily shut down in hard shale at 3,522 feet. The test cored salt water sand from 3,287-95 feet with no reported show of oil or gas from that depth to the present depth. This test, which is slightly off the original structure, was originally started to drill to 5,000 feet, and officials are planning on moving in a heavy rig to make the deep test. In the Calion area, Mrs. R. K. Jones' No. 1 J. Davis, Section 28-16-14, has sidetracked 7-inch casing at 2,320 feet with the old total depth at 2,764 feet, and will test a likely looking sand encountered around the old total depth. An important wildcat test near the town of Stamps in Lafayette County, Benedum & Trees' No. 2 Bodcaw Lumber Co., Section 19-16-23, was abandoned in red shale at 5,032 feet. An effort was made to make a Schlumberger test, but the tester never reached the bottom. Another wildcat along the same fault line to the southwest of the Benedum & Trees' test, A. H. Tarver's No. 1 Russell, Section 12-17-15, is shut down at 3,012 feet. This is the third test in the vicinity southwest of Lewisville in search of Blossom or Woodbine production.

North Louisiana

The one small oil producer in this district was listed from the Bellevue Field, Bossier Parish. Premier Investment Co.'s No. 16 Wyche, Section 14-19-11, is pumping 20 bbls. of oil and considerable salt water from 420 feet. The Woodbine sand in the Sligo Field, Bossier Parish, furnished a good gasser with the completion of Woodley Petroleum Co.'s No. 5 E. A. Schuler in Section 13-17-12. The well gauged 58,000,000 feet of gas and 1,250 pounds rock pressure from 2,792 feet. Practically all of the recent drilling in that area has been to the upper Trinity around the 4,300-foot level in a prolific gas field that produced from sands from 900 feet to the Oolitic lime in the Trinity. The shallow Blanchard Field, Caddo Parish, reported one gasser. M. Segall's No. 3 Sharpe, Section 11-18-16, has an estimated open flow of 3,500,000 feet from 7 feet of sand at 958 feet. The Ouachita and Union Parish areas of the old Monroe Field turned in three fair gas wells. In the former, Hamilton Gas Co.'s No. 1 Parke, Section 2-19-3e, gauged 4,000,000 feet and 985-pound rock pressure from 2,178 feet, and James A. Noe's No. 1 fee, Section 18-3e, gauged 1,250,000 feet from 2,184 feet. Carbons Consolidated's No. 1 Beasley, Section 6-21-4e, is a 4,000,000-foot gasser with 1,000 pounds rock pressure from 2,200 feet. Two wildcats in the Monroe area were dry holes. Zeiger & Bacon's No. 1 Crossett Lumber Co., Section 41-23-6e, Morehouse Parish, was abandoned at 3,111 feet; and in Ouachita Parish, Wilson & Mitchell's No. 1 Williams, Section 5-16-1e, was dry at 2,763 feet. On the eastern flank of the Zwolle Field, J. H. Reeves' No. 1 Bowman-Hicks, Section 9-7-12, was dry and abandoned at 2,875 feet.

The North Louisiana wildcats developed nothing of interest during the past seven days. In Bossier Parish, Plain Dealing Syndicate's No. 1 S. H. Bolinger, Section 35-23-13, topped the Nacatoch at 1,877 feet, and logged the top of the chalk at 2,304 feet. The test is coring at 2,762 feet. G. R. Stevens' No. 1 Hart, Section 22-21-16, in the old Trees City area of Caddo Parish, has set 6-inch casing on top of the Nacatoch at 1,018 feet and is bailing to test from 1,036 feet. The well has indications of making a 50-bbl. pumper, thereby opening up new shallow production in an old area, long abandoned from this depth. Other North Louisiana wildcats follow: De Soto Parish, W. T. Coleman's No. 1 Rambin estate, Section 13-12-12, set 8-inch casing at 830 feet and is bailing to test a show from 840 feet; Natchitoches Parish, Benedum & Trees' No. 1 Carver estate, Section 6-8-7, logged the base of Austin chalk at 5,010 feet and is drilling in shale at 5,020 feet.

Wildcat Operations in Louisiana-Arkansas

(Rotary operations unless otherwise designated)

NORTH LOUISIANA

AVOYELLES PARISH

Bell Oil Co.'s No. 1 Woodley, 330 ft. S and W NE cor. NW Sec. 11-2n-5e.
Washing to bottom 1,700 ft.

BIENVILLE PARISH

M. V. Duncan et al's No. 1 Hutton, 400 ft. S, 330 ft. E, NW cor. Sec. 4-18-7.
Set 10-in. 125 ft.

Saline Drlg. Co.'s No. 1 Pardee, Sec. 27-14-6.
Coring 3,030 ft.

BOSSIER PARISH

Howard & Baird's No. 1 Gold, 150 ft. S and E, NW cor. Sec. 36-20-13.
S.D. for water 1,136 ft.

W. A. Kirkland's No. 1 Jarrett & McKeller, 330 ft. N and W, SE cor. NW NW Sec. 3-21-13.
Set 10-in. 43 ft.

Plain Dealing Synd.'s No. 1 S. H. Bolinger, Sec. 35-23-13.
Drlg. 1,795 ft.

Producers O. & G. Co.'s No. 1 Weiner, 660 ft. N and W, SE cor. Sec. 7-17-11.
Comp.; 16,400,000 ft. gas 3,990 ft.

Leonard Co.'s No. 1 Pearson, 250 ft. S and E, of C Sec. 22-21-14.
Coring 1,820 ft.

Woodley Pet. Co.'s No. 5 Schuler, 660 ft. N, 660 ft. E, SW cor. NW Sec. 13-17-12.
Comp. for 58,000,000 ft. gas at 2,792 ft.

CADDO PARISH

Ark.-La. Tex. O. & G. Co.'s No. 1 LeRosen, 990 ft. E, 330 ft. N, SW cor. NW Sec. 15-20-15.
Set 10-in. 100 ft.; drlg. 700 ft.

W. T. Bell et al's No. 1 Bostick, 1,320 ft. E, 660 ft. N, SW cor. Sec. 12-22-16.
S.D. for water, 2,540 ft.

Burkett O. & G. Co.'s No. 1 Lindholm, 400 ft. S and E, NW cor. NE SE Sec. 15-17-14.
S.D. 1,044 ft., repairing rig.

O. L. Hickman's No. 1 fee, 1,046 ft. S, 1,700 ft. E, NW cor. Sec. 36-17-15.
Drlg. 2,632 ft.

A. D. King, tr.'s No. 1 Roach, 641 ft. E, 375 ft. N, SW cor. SE Sec. 4-14-16.
S.D. 2,138 ft.

M. Rodgers' No. 4 Muslow, 1,495 ft. S, 1,270 ft. W, C Sec. 4-20-15.
Drlg. 1,220 ft.

G. R. Stevens' No. 1 Hart, 300 ft. N and E, SW cor. E½ SW Sec. 22-21-16.
Drlg. 1,018 ft.

Shreveport Oil Corp.'s No. 2-C Muslow, 1,106 ft. E, 280 ft. N, SW cor. NW Sec. 4-20-15.
Drlg. 1,800 ft.

Shreveport Oil Corp.'s No. 3-B Muslow, 742 ft. E, 710 ft. S, NW cor. Sec. 4-20-15.
Set 6⅝-in. 2,158 ft.

Leonard Co.'s No. 1 Green, 150 ft. N and E, SW cor. NE SW Sec. 3-20-15.
Set 7-in. 808 ft.

Leonard Co.'s No. 4 S. P. Harrell, 230 ft. N and W, SE cor. NW SW Sec. 2-21-16
Set 6⅝-in. 1,044 ft.

V. & F. Oil Co.'s No. 1 Etchison, 330 ft. N and E, SW cor. NE NE Sec. 16-20-15.
Set 10-in. 40 ft.

CATAHOULA PARISH

T. R. Hincy's No. 1 La. Central Lbr. Co., Sec. 32-9-4e.
S.D. for D.S. 1,541 ft.

DESOTO PARISH

L. H. Alderson's No. 1 Peek, SE cor. NW NE Sec. 35-11-13.
Dry and abd. 3,070 ft.

Bayou Pierre Oil Co.'s No. 1 B. Y. Wemple, C SE NE SW Sec. 14-12-11.
W.O.S.R. 2,731 ft.

Century O. & Drlg. Co.'s No. 1 Morton, 300 ft. N and E SW cor. SE NE Sec. 27-11-14.
S.D. 1,760 ft.

W. T. Coleman's No. 1 Rambin Est., 300 ft. S and E, NW cor. SW SE Sec. 13-12-12.
Arranging to test 840 ft.

Dempsey & Manziel's No. 1 Thigpen, 375 ft. S, 330 ft. W, NE cor. SW NE Sec. 33-13-13.
S.D. 1,730 ft.

DeSoto Pet. Co.'s No. 1 B. Y. Wemple, C 8½ SE NE SW Sec. 14-12-11.
S.D. 2,073 ft. (corrected).

E. L. Foster's No. 1 Youngblood, Sec. 9-11-14.
R.U. to deepen 1,502 ft.

Hester et al's No. 1 Alston, 330 ft. S and W of center of Sec. 11-11-16.
Fishing 2,520 ft.

George Le Grande's No. 1 Vance, 180 ft. N and W SE cor. SW Sec. 34-12-16.
S.D. for csg. 2,030 ft.

Ben F. Smith's No. 1 Bonds, 200 ft. E, 500 ft. N, SW cor. Sec. 23-13-11.
Coring 2,570 ft.

National Oils, Inc.'s No. 1 B. Y. Wemple, NW SW Sec. 14-12-11.
Set 8-in. 62 ft.

LA SALLE PARISH

F. A. Trichello's No. 1 Urania, Sec. 3-9-1e.
S.D. 1,491 ft.

MOREHOUSE PARISH

Zeiger & Bacon's No. 1 Crossett, 400 ft. N, 300 ft. W, SE cor. Sec. 41-23-6e.
Dry at 3,111 ft.

NATCHITOCHES PARISH

Benedum & Trees' No. 1 Carrier Est., 300 ft. N and W, SE cor. Sec. 6-8-7.
Drlg. 4,940 ft.

Clyde Crichton's No. 1 Friedman Est., 496 ft. N, 426 ft. E, SW cor. Sec. 52-7-6.
S.D. for wtr., 1,058 ft.

Jack Lent's No. 1 Brown Lbr. Co., 400 ft. S, 300 ft. E, NW cor. NE SW Sec. 27-9-13.
T.A. 2,470 ft.; old T.D. 2,002 ft.

Missouri Drlg. Co.'s No. 1 Brown Lbr. Co., 400 ft. N, 330 ft. W, SE cor. Sec. 5-10-10.
S.D. 1,035 ft.

Roy A. Raines et al's No. 1 Raines est., 330 ft. N and E, SW cor. Sec. 8-9-10.
S.D. for water 2,606 ft.

OUACHITA PARISH

Hamilton Gas Co.'s No. 1 Parker, 557 ft. S. 473 ft. W. NE cor. Sec. 2-19-3e.
Comp. for 4,000,000 ft. gas at 2,178 ft.

Inabent & Piper's No. 1 D'Arbone, 660 ft. N and E, SW cor. Sec. 23-19-3e.
Set 8-in. 2,160 ft.

James A. Noe's No. 1 fee, 253 ft. N, 55 ft. W, C Sec. 2-18-3e.
Set 12½-in. 182 ft.; set 8-in. 740 ft.; Comp. for 1,250,000 ft. gas at 2,184 ft.

RAPIDES PARISH

Evars & Collingsworth's No. 1 Hickman, 330 ft. S and E, NW cor. Sec. 40-4-1e.
Dry and abd. 2,130 ft.

C. D. Loe, trustee's No. 1 Baird Est., SE cor. Sec. 40-5n-1w.
Rigging up.

RED RIVER PARISH

C. M. Cope et al's No. 1 Thomas, 330 ft. S and E, C Sec. 34-13-3.
S.D. 2,375 ft.

O. K. Oil Co.'s No. 1 Franklin Realty Co., 100 ft. N and E, SW cor. SE SW Sec. 32-11-9.
S.D. 1,340 ft.

Windsor Oil Co.'s No. 2 Jenkins, 1,980 ft. S and E, NW cor. Sec. 14-12-11.
W.O.S.R. 2,775 ft.

SABINE PARISH

H. J. Brothers et al's No. 1 Edwards, 300 ft. S. and W. NE cor. SW NW Sec. 29-9-13.
Running tubing to test 1,857 ft.

R. B. Campbell et al's No. 1 Cook Land Co., 150 ft. N, 300 ft. W, SE cor. NW NW
S.D. 2,130 ft.
Tested dry after acid; S.D.; W.O. 1,935 ft.

Helena Oil & Gas Co.'s No. 1-B Graham, 250 ft. S and W NE cor. NE NW Sec. 20-9-12.
S.D. 2,000 ft.

Lawson-Leavell's No. 2 Bank of Pleasant Hill, 330 ft. N and W, SE cor. NW NE Sec. 29-9-13.
Set 10-in. 45 ft.; drlg. 650 ft.

(Continued on Page 84)

Production

Estimated daily gross production all companies week ending December 14, 1934:

NORTH LOUISIANA	
Bellevue	530
Caddo Light	4,770
Caddo Heavy	1,770
Converse	1,355
Cotton Valley	440
De Soto and Red River	1,470
Elm Grove	365
Haynesville	8,670
Holly	170
Homer	2,660
Pleasant Hill	190
Sarepta-Carterville	560
Urania	3,320
Zwolle	2,400
Total	23,670
SOUTH ARKANSAS	
Champagnolle	1,990
El Dorado	2,215
Lisbon	350
Miller County	1,360
Nevada	940
Smackover Ligh.	2,305
Smackover Heavy	18,910
Stephens	610
Urbana	2,295
Total	31,075

Fifteen Locations in Southeastern New Mexico, Several of Them Being Important Wildcats

By TOLBERT R. INGRAM
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Dec. 17.—Fifteen new locations in southeastern New Mexico, several of which are important wildcats, bring drilling operations in that area up to the highest number in the past five years. These include three in the Cooper area, five in the Eunice area, three in the Hobbs area and one each in the Lea and San Simion areas in Lea County and one in Eddy County. The biggest producer in New Mexico outside of the Hobbs Pool was completed in the Texas Co.'s No. 1 Everett, in the Cooper Pool, estimated at 10,000 to 15,000 bbls. a day. This was one of four completions in that district and one in San Juan County. Three old wells, one each in Dona Ana, Hildalgo and Guadalupe Counties were abandoned.

An oil discovery, the extent of which is not yet known, was reported in Archuleta County, Colorado, just north of the New Mexico line. The Trojan test of the Pennsylvanian near Lamar, in Prowers County, has resumed drilling after stopping to test an oil show. Leasing of state land in eastern Colorado is becoming more active.

Lease on famous Section 36-40-70, Salt Creek, was renewed for another 10 years at 30 per cent royalty as compared with 65 per cent in the previous period. White Eagle Oil Corp. and Sinclair-Wyoming Oil Co. were only bidders for government royalty oil in Salt Creek. The California Co. has completed its Quealy Dome test in Albany County for 60 bbls. initial, opening a new light oil pool. One new location was reported in the Garland district and two small completions in Sweetwater and Converse Counties.

Seasonal decline in drilling in Montana is reported with all wells shut down in the Kevin-Sunburst Field and only two new locations in Cut Bank. In the latter two wells were completed for 75 bbls. each. Ohio Oil Co.'s No. 14 Maddox, an edge well at Dry Creek, pumped 352 bbls. the first 24 hours.

A deep test is spudding in Grant County, Washington.

NEW MEXICO

Pipe line runs from Lea County pools in November were as follows: Hobbs, 971,021 bbls.; Eunice, 114,755; Jal, 104,010; Cooper-Lynn, 65,020; Lea, 42,642; North Lea, 580.

Cooper Area

The Cooper Pool in Lea County, between the Jal and Eunice Pools, jumped into big production the past week when the Texas Co.'s No. 1 Everett, C SE NW Section 35-24-36, was completed for an estimated production of between 10,000 and 15,000 bbls. a day. It was shut in without being gauged, but its performance indicated that it is the biggest well so far completed in the pool and the largest in southeastern New Mexico outside of the Hobbs Pool. It is in the south end of the development and a west offset to the same company's No. 1 Ogg, C SW NE of Section 35, which gauged 565 bbls., with 1,750,000 feet of gas, the first 24 hours. No. 1 Everett had an estimated flow of 6,000,000 feet of gas with the oil. It was shut in for gauging. Total depth is 3,442 feet and the pay was found at 3,432-42 feet. The 7-inch was cemented at 3,410 feet with 175 sacks.

Another completion was Continental Oil Co.'s No. 1 Gates, C NE NW Section 23-24-36, which made 75 bbls. in one hour, or at the rate of 1,800 bbls. a day, with 12,800,000 feet of gas, from the pay at 3,470-3,515 feet, the latter being the total depth. The 7-inch was cemented at 3,169 feet and the 2½-inch tubing was run to 3,505 feet. It is a west offset to Humble Oil & Refining Co.'s No. 1 Cooper.

Another completion was Phillips Petroleum Co.'s No. 6 Woolworth, C NW NW Section 26-24-36, which offsets three producers. It averaged 166 bbls. an hour on a five-hour test, or at the rate of 3,984 bbls. a day. It made only 500,000 feet of gas. The pay was at 3,486-95 feet, the latter being the total depth.

Among the near completions, which have not yet been gauged, are the following:

Empire Gas & Fuel Co.'s No. 1 Everett, C NE SW Section 35-24-36, is coring in lime at 3,372 feet. It had gas at 3,234-45, 3,306-17 and 3,317-25 feet, but did not stop to test. Amerada Petroleum Corp.'s No. 1 Everett, C NE NW Section 35-24-36, cut the pay at 3,429-53 feet, the latter being the total depth, and is waiting after cementing the 7-inch at 3,418 feet with 375 sacks.

New Locations

Four new locations were released as follows:

The Texas Co.'s No. 2 Ogg, C NW NE Section 35-24-36, rig up; the Texas Co.'s No. 3 Ogg, C SW NW Section 35-24-36, a west offset to its No. 1 Everett, the record well for the pool, cellar and pits; Stanolind Oil & Gas Co.'s No. 4-A Meyers, C NE SW Section 22-24-36, cellar and pits; and Stanolind Oil & Gas Co.'s No. 5-A Meyers, C NW NE Section 22-24-36, a location.

Last September the petroleum administrator designated 12 wells for the development program for the Cooper Pool for the year. Operators at the time opposed this on the ground that at least 25 wells would have to be drilled in order to take care of offset and lease requirements. Even the operators' program has now gone by the board and 21 wells have already been completed this year with 14 active operations under way, or a total of 35. The field is under proration and Umpire C. G. Staley's schedule for the present holds wells down to 154 bbls. each daily.

Routine drilling is as follows:

Stanolind Oil & Gas Co.'s No. 3-A Meyers, C SW NE Section 22-24-36, cemented the 9⅝-inch at 3,096 feet with 775 sacks and shut down. Phillips Petroleum Co.'s No. 9 Woolworth, C NW NE Section 27-24-36, is drilling at 3,460 feet in lime, and its No. 10 Woolworth, C NE NW Section 26-24-36, cemented the 9⅝-inch at 1,337 feet with 350 sacks and is drilling at 2,550 feet in anhydrite. Tide Water Oil Co.'s location in C SW SE Section 26-24-36, has changed name of well from No. 1 Harrison to No. 1 Woolworth. Humble Oil & Refining Co.'s No. 3 Cooper, C SW SE Section 14-24-36, used 1,500 sacks in cementing the 9⅝-inch on bottom at 2,778 feet, in lime, and is waiting. Its No. 1 Coats, C NW NE Section 10-24-36, which went wild and caught fire, has been saved and is waiting on drill stem at 3,355 feet. All the junk has been fished out. Simms Oil Co.'s No. 1 Woolworth, C SE SE Section 35-24-36, is rigging up rotary. Gypsy Oil Co.'s No. 2 Cooper, C NW SE Section 23-24-36, is standing with cellar and pits completed, and its No. 1 1 Cooper, C SW NE Section 23-24-36, a recent completion, is standing for a Schumerberger test.

Five new locations in the Eunice area brings the total operations under way up to 19.

Shell Petroleum Corp. and Devonian Oil Co.'s No. 1 State, C SW NE Section 20-21-36, which extends the proven area half a mile to the east, was completed at 4,038 feet, after plugging back from 4,175 feet, for 2,032 bbls. of oil plus 25 per cent basic sediment and water, with 2,000,000 feet of gas, the first 24 hours. This gauge was made after treating with 1,000 gallons of acid. Water rose 3,200 feet in 20 hours and the hole was plugged back from 4,040 to 4,038 feet. The pay was at 3,850-4,038 feet. The 3-inch tubing was run to 4,037 feet. The elevation is 3,588 feet.

Shell Petroleum Corp.'s No. 1 State-Endura, C SE NE Section 12-21-35, which will extend the pool 1½ miles to the west, is coring in lime at 3,498 feet. It gauged 38,000,000 feet of gas at 3,229-34 feet and had a show of sweet oil at 3,178-94 feet, 600 feet above the objective.

The new locations are as follows:

Amerada Petroleum Corp.'s No. 1-D State, C NW NW Section 1-20-36, a wildcat, 7 miles north of production, building rig; Atlantic Oil Co.'s No. 1-C State, C SW SE Section 5-21-36, half a mile north of the nearest producer, a location; and Skelly Oil Co.'s No. 1-C State, C NE NW Section 29-21-36, cellar and pits. The Amerada wildcat is on a separate high worked out by the Geophysical Research Corp. and checked by the company's own geologists. Continental Oil Co.'s No. 3-A Meyers, C SW SW Section 8-21-36, and No. 1, C NE NE Section 18-21-36, both locations.

Routine operations are as follows:

Peerless Oil & Gas Co.'s No. 1 State, C NW SW Section 29-21-36, cemented the 9⅝-inch at 1,663 feet with 900 sacks and is waiting. Atlantic Oil Co.'s No. 1-F State, C SW SW Section 29-21-36, is bottomed at 3,932 feet in lime and is waiting after cementing the 7-inch at 3,896 feet with 800 sacks. Skelly Oil Co.'s No. 1-B State, C NW NW Section 16-21-36, is drilling at 2,894 feet in anhydrite and lime, and the Texas Co.'s No. 2 Rector, C SE SE Section 30-21-36, is a near completion and on a drill stem test at 3,891-3,941 feet, made an estimate of 83 bbls. in one hour. It is waiting after cementing the 7-inch at 3,873 feet with 250 sacks. Tide Water Oil Co.'s No. 3 State-Foster, C NW NE Section 8-21-36, has rig up, and its No. 4 Coleman, C SE NE Section 17-21-36, a near completion, is bottomed at 3,943 feet and preparing to test after running the 2-inch to 3,933 feet.

Continental Oil Co.'s No. 2-A Lockhart, C SW SE Section 18-21-36, is drilling at 175 feet, and its No. 1-B Meyers, C NE SW Section 9-21-36, is driling at 3,720 feet in lime. Its No. 4-A Meyers, C NE SW Section 17-21-36, a recent completion, has not yet had a pumping test. Continental's No. 1-A Lockhart, C SE NE Section 30-21-36, cemented the 10¾-inch at 350 feet with 150 sacks and is drilling at 1,205 feet in red beds. Gypsy Oil Co.'s No. 2 Bell-State, C SE SE Section 8-21-36, is driling at 2,770 feet in lime.

Jal Area

Continental Oil Co.'s No. 2-A Wells, C NW NE Section 12-25-36, an outside well at the north of the pool and an east offset to its No. 1-A Wells, is shut down for orders at 3,518 feet in lime. It had 18,000,000 feet of gas a day at 3,343-50 feet, but ran into sulphur water below that horizon. The water increased at 3,510-14 feet and flowed through the drill stem. Empire Gas & Fuel Co.'s No. 1 Dyer, NE SW SE Section 31-25-37, is drilling at 2,969 feet in lime. It had gas at 2,744-72, 2,838-58 and 2,880-89 feet, but no gauge was taken.

R. H. Henderson and others' No. 1 Ogg, C NW NE Section 11-25-36, on the northwest edge, has completed cellar and pits. The Texas Co. assigned 400 acres for the test including W half and W half NE Section 11 for $200 per acre, payable one-fourth out of production. Henderson's No. 1 Langtry, C SE SE Section 8-25-37, 2½ miles east of production, has cellar and pits completed. Acreage assigned by Stanolind Oil & Gas Co. for this test includes SE Section 8; NW SE Section 9; SW NW Section 10; SW Section 15; and SW Section 17.

Continental Oil Co.'s No. 2-X Sholes, NW cor. SE Section 13-25-36, is rigging up rotary at 150 feet, and Repollo Oil Co.'s No. 2 Hannagan, NE cor. SW Section 12-25-36, has rig up. E. B. Guess' No. 1-B Justis, SW NW NW Section 20-25-37, is shut down at 1,060 feet in red beds.

Hobbs Area

Three new locations, all semiwildcats ahead of production, were staked in the Hobbs Pool. Shell Petroleum Corp.'s No. 2-D State, SE NE NW Section 24-18-37, on the northwestern flank, one-fourth of a mile north of its No. 1-D State, is a location. Amerada Petroleum Corp. and Skelly Oil Co.'s No. 1-A State, NE SW NW Section 24-18-37, also a location, is a diagonal offset on the northwest of Shell's No. 1-D State. The water line has not yet been determined in this part of the field. The other location is no the northeastern flank in J. P. Cusack and others' No. 1 Moore, SW cor. NE Section 28-18-38.

Continental Oil Co.'s No. 2 Grimes, SE SE Section 28-18-38, cemented the 10¾-inch at 243 feet with 100 sacks and is drilling at 600 feet in red beds. Gypsy Oil Co.'s No. 1 North Grimes, SW cor. Section 21-18-38, set the 13⅜-inch at 270 feet with 200 sacks and is drilling at 2,310 feet in salt. Shell Petroleum Corp.'s No. 2 Sanger, SW SE SW Section 27-18-38, is preparing to run the 12½-inch at 233 feet, in the red beds. National Securities Oil Co.'s No. 1 Linam, NE SE SW Section 33-18-37, is cleaning out at 4,165 feet to deepen from old depth of 4,272 feet.

Lea Area

Another wildcat location in the Lea area was released this week in R. H. Henderson and others' No. 1 Russell-Steele, C NE NW Section 24-20-33, 1½ miles west of Henderson, Dexter & Blair's No. 1 Jewett-McDonald, SE cor. Section 18-20-34, which was completed in 1929 at 3,535 feet for 60 bbls. initial of 34 gravity oil. No well has been drilled in the vicinity of this discovery since its completion. Western Drilling Co. made a location in 1931 in the SW cor. Section 14-20-33, but drilling did not follow. The Jewett-McDonald well, in turn, is northwest of the Lea Pool.

The Texas Co.'s No. 4-A Lynch, C SE NE Section 34-20-34, which had an oil show at 3,641-43 feet, went into sulphur water with an increase in fluid at 3,750-51 feet. It is drilling ahead in lime at the last named depth. This well is one-third of a mile to the northeast of the discovery well and the same distance southeast of No. 3-A Lynch, a producer. Same company's No. 1 Elliott, C NE NE

Section 22-20-34, in the North Lea extension, is running the 6¼-inch to bottom at 3,575 feet.

The Texas Co.'s No. 1 Swearingen, C NE SW Section 8-20-34, a wildcat northwest of the Lea Pool and 1½ miles north and east of the Jewett-McDonald well, is shut down at 2,315 feet in salt. The Texas Co.'s No. 1 Moore, C NW SE Section 21-20-32, west of the Lea Pool, has cellar and pits completed.

Maljamar Area

Maljamar Oil & Gas Co.'s No. 4 Baish, NE SE NE Section 21-17-32, set the 8¼-inch at 2,955 feet and is drilling at 3,065 feet in anhydrite.

Big Eddy

Stanolind Oil & Gas Co.'s No. 1 Duncan, SE SW Section 30-21-30, is drilling at 3,085 feet in salt.

Caprock Area

Vierson & Brown's No. 1 Robinson, C NW SE Section 14-11s-32, is standing with cellar and pits completed.

San Simion Area

Location for an important wildcat was released in Humble Oil & Refining Co.'s No. 1 Fay Saunders, C NE NE Section 4-22-34, northwest of the Cooper Pool and southwest of the Eunice Pool. It is 2½ miles northeast of the old Marland Oil Co.'s No. 1 Slattery, SW cor. NE Section 7-22-34, which was abandoned in 1929 at 4,155 feet, and the same distance north and east of the Reynolds Drilling Co.'s No. 1 Merchant, SE cor. NE Section 15-22-34, abandoned in 1929 at 4,052 feet.

Eddy County

One new location was released in Eddy County in the Getty Oil Co.'s No. 7 Dooley, SW cor. NW Section 24-20-29, in the Getty Pool. It is in proven area and is drilling water well. This is the first active operation in the Getty Pool for several years. Flynn, Welch & Yates' No. 2 Storey, C NE SW Section 30-19-30, to the northeast of the Getty Pool, is drilling at 1,525 feet in anhydrite.

T. D. Gibson's No. 1 Quillin, C SE NE Section 15-19-31, East Eddy district, is an abandoned location. It was staked about a year ago, but active operations did not get under way.

The Pecos Valley Drilling Co.'s No. 1 Mock, NE SW SW Section 29-24-27, Black River district, did not begin spudding for the reported reason that an operator on this same permit had declined to plug and abandon a well drilled half a mile to the east. Rig was skidded to the NE NW NW Section 32-24-37, on a state lease, and it is drilling at 560 feet in lime. The objective is expected at around 2,300 feet. Ralph Spearow and associates of Portland, Ore., are the interests behind this test.

In the Artesia area the Pecos Valley Gas Co.'s No. 10 Vandagriff, E NW NE Section 8-17-28, set the 8¼-inch at 573 feet and is drilling at 889 feet in lime. Red Lake Oil Co.'s No. 3 State, SW cor. NE Section 22-17-28, is drilling at 1,985 feet in lime and has a show of oil at this depth. Flynn, Welch & Yates' No. 70 State, C SW NW Section 27-18-28, is shut down at 305 feet in red beds and its No. 71 State, C SW NE Section 10-19-28, is drilling at 275 feet in red rock.

A. & M. Petroleum Co.'s No. 1 State, SW NE Section 15-21-27, Carlsbad district, is drilling at 1,220 feet in lime. Neal Wills and others' No. 1 Montgomery, SW NE Section 10-23-30, Salt Lake district, is bottomed at 385 feet in salt and stopped to cement the 8¼-inch at 382 feet with 40 sacks. It topped the salt at 370 feet. Skelly Oil Co.'s No. 1 Dow, C SW SE Section 15-17-31, Maljamar area, has rig up.

Chaves County

C. J. Franks' No. 1 Roswell Insurance, NE cor. SE Section 30-11-25, Roswell district, which flowed 40 bbls. in two and one-half hours, but which failed to flow after treating with acid, is being retreated. It found a pay at 955-996 feet. It is a wildcat. Roswell Oil Syndicate's No. 1 Hinkle, C NE SE Section 17-11-27, has reached contract depth of 1,800 feet and is shut down for orders. Leonard and others' No. 1 Nunler, C NW SW Section 27-11-30, Caprock area, is drilling at 100 feet in red beds. Comanche Drilling Co.'s No. 1 Sloop-Purcell, NE cor. SE Section 10-11-26, is shut down in lime at 1,210 feet.

Dona Ana County

Viking Oil Co.'s No. 2 Cox ranch, SW NW NW Section 26-23-5e, which has been shut down at 900 feet since August, 1933, is reported abandoned without plugging at that depth, on account of lack of funds.

Roosevelt County

The Claudell Development Co.'s No. 1 Wilmes, C SW SE Section 21-2s-30, Pomeroy district, is drilling at 2,085 feet in salt. Top of the salt was at 1,370 feet. The 8¼-inch is at 1,528 feet.

Guadalupe County

Bellevue Oil Syndicate's No. 1 McMillan, SW cor. Section 24-5n-16, Mesa Leon district, is reported abandoned without plugging at 4,718 feet. It was shut down at this depth in the summer of 1932. The operation also carried the names of the Los Angeles-Hollywood Syndicate and then the New Mexico Producing & Refining Co., Ltd.

Hidalgo County

Thomas and others' No. 1, NE SW SW Section 5-22-20, near the Arizona line, is reported abandoned at 900 feet. It started drilling early in 1930.

McKinley County

Royer Oil Co.'s No. 1 Santa Fe Railway, C NW SW Section 13-15-10w, Walker Dome, spudded December 3 and is drilling at 268 feet. It is a south offset to the discovery well drilled by the Midwest Refining Co.

San Juan County

Continental Oil Co.'s No. 40, NE NE Section 2-29-19, Rattlesnake Field, was completed in the Dakota at 746-59 feet for better than 60 bbls. a day.

COLORADO

Recent action of the Colorado State Land Board in revising the terms upon which school lands are leased for oil and gas has resulted in a number of inquiries from oil companies in the Mid-Continent and Texas fields and some acreage already has been leased to major companies under the new regulations. Heretofore the board required drilling on a state lease within six months, although it was lenient in extending this provision. Also, it reserved 160 acres out of each section leased. The new regulations permit regular 10-year commercial leases without drilling requirements and no acreage is reserved. As a result of this last provision the Indian Territory Illuminating Oil Co. has been able to fill in the gaps in its block in Yuma County. Two months ago this company, following a seismograph survey, blocked up around 30,000 acres in Yuma County, mostly in Township 2s, Range 43w, about half of which was state land. In as much as the company already had leases on the state land other than the reserved blocks, the board decided it was only fair to give it the first opportunity to lease this reserved acreage. The company is reported leasing in a southwesterly direction almost as far as Stratton, in Kit Carson County.

The Indian Territory company's seismograph crews were last reported shooting in the Mount Pearl district in Cheyenne County, in Townships 12 and 13s, Range 48w, and south of Eads, in Kiowa County in Townships 20 and 21s, Ranges 47 and 48w. Continental Oil Co. crews were last reported working northeast of Lamar in Prowers County in Townships 19s-44 and 45w, and 21s-44w.

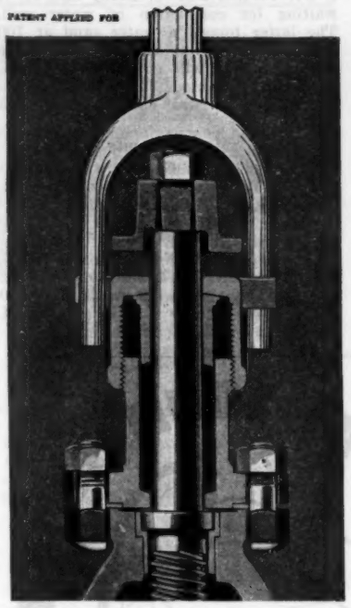
Prowers County

Trojan Oil & Gas Co.'s No. 1 Lotus Oil, NW NE NE Section 15-23-46, near Lamar, has resumed drilling after stopping to test a show of oil at 5,954-61 feet and 4,019-33 feet, and is making

No Costly Digging...

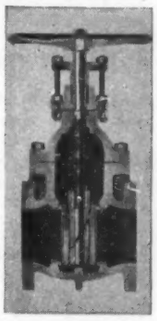
You tighten this Revolutionary Valve Stuffing Box with a key...from ground level

PATENT APPLIED FOR



JENKINS' radically different Stuffing Box that you tighten with a key from the ground level is a real money-saver. It enables you to avoid the costly digging formerly required to get at the stuffing box nuts on inaccessible gate valves for tightening with a wrench. And because tightening is made such a simple and quick operation, inspection may be done frequently to prevent expensive leaks.

It will pay to seriously consider the cost-cutting Fig. 885 Jenkins "Key-Operated" Stuffing Box. It may be applied to new or old Jenkins Iron Body Gate Valves and savings may quickly return the low additional cost. Let us send full details.



Shown at right is Jenkins' Fig. 877 Extra Heavy Double Disc Parallel Seat Gate with the regular stuffing box. It is a simple matter to apply the new Fig. 885 Key-Operated Stuffing Box to this valve.

Other notable features of the Fig. 885 "Key Operated" Stuffing Box are: the use of bronze throughout the stuffing box assembly to prevent corrosion; and the exceptional depth of the box which means that the valve is easier to make tight and requires packing less often.

JENKINS BROS., 80 White St., New York, N.Y.; 510 Main St., Bridgeport, Conn.; 524 Atlantic Ave., Boston; 133 No. Seventh St., Philadelphia; 822 Washington Blvd., Chicago, Ill.; JENKINS BROS., Limited, Montreal; London

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new hole at 4,005 feet in shale and lime. The show was treated with 1,000 gallons of 50 per cent solution through a string of 4¾-inch with packer. While pulling the string, water broke through and the 6⅝-inch at 3,941 feet was lowered a few inches for a shutoff. The hole was then bailed down, but there was no pronounced increase in the oil and it was decided to drill on down.

Archuleta County

An oil discovery which holds out promise of opening a new pool, but the extent of which is not yet known, is reported in the Oil City Petroleum Co.'s No. 1-A Garnett, NE cor. Lot 3, SW Section 25-33n-2e, near the Price oil seep, southeast of Pagosa Springs and just north of the New Mexico line. A telegram to the writer said it topped the Muddy sand at 970 feet and started making high gravity oil. Drilling was suspended until pipe can be run and cemented and tanks erected. No other details are available except that a telephone message confirming the above added that it was believed to be a commercial well. Same interests some time ago drilled two wells to the southwest from 1 to 2 miles away, one of which showed some gas in shallow horizons and another was put down to determine the trend of the formations. Two structures are reported in the district, the Chromo and the Price. Drilling on the Chromo Dome was less favorable than on the structure to the north.

Park County

The South Park Oil Co.'s No. 1 State, SE cor. SW Section 16-11-75, Hartsel district, is drilling at 675 feet and moving in the 10¾-inch.

Adams County

Riddle Petroleum Co.'s No. 1 Baxter, C SW Section 2-3s-66, Derby district, is waiting for completion of water well. The latter topped a water sand at 760 feet and is running the 6⅝-inch before drilling in. It will go to the Milliken, expected at around 1,200 feet. A 10-foot coal vein was encountered at 95 feet.

Moffat County

Stanolind Oil & Gas Co.'s No. 22-SD Shaw, NW SE NW Section 27-4n-92, Iles Dome, is drilling below 1,934 feet.

Montezuma County

Coon & Teague's No. 1 West, NE NW NE Section 31-36-17, McElmo district, cemented cave with 10 sacks at 2,650 feet. It had a show for 50,000 feet of gas in sand at 2,640 feet.

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WYOMING

The Wyoming state land board has renewed the lease on Section 36-40-79, in the Salt Creek Field, for another 10 years to the Midwest Oil Co., subsidiary of the Salt Creek Producers Association. In turn, that company assigns a half-interest in the lease to the Wyoming Associated Oil Co., subsidiary of the Mountain Producers Corp. The State will receive a royalty of 30 per cent during 1935, after which the rate will be adjusted to meet decline in production and conditions in the industry existing at the time. The operation of this famous lease has been extremely profitable to the Wyoming school fund. It has been held by the same interests since 1912 and up to April 1, 1934, has produced 16,847,790 bbls. of oil. When the lease was renewed in the fall of 1929 the lessees agreed to pay a royalty of 65 per cent of production, this offer including the right to purchase the royalty oil at the Mid-Continent posted price. This unusually high bid was made at the time in order to hold intact the orderly development of the field and prevent an excessive drilling campaign. Production reached its peak in 1924 and 1925 and now amounts to only 600 bbls. a day. The State has received $4,691,000 in royalty from the lease in the past 10 years.

Bids were opened by the Secretary of the Interior in Washington, D. C., on December 10 for the Government's royalty oil from Salt Creek, amounting to 13.6 per cent of the field's total production. The only bid submitted was a joint bid of the White Eagle Oil Corp. and the Sinclair-Wyoming Oil Co., subsidiary of the Consolidated Oil Corp., of a premium of 5 cents per barrel over the field price in Kansas, Oklahoma, or Wyoming, whichever is the highest, for crude of the same grade. The last contract was made in December, 1931, when the Producers & Refiners Corp. offered a premium of 22¼ cents a barrel. Royalty oil for first eight months of 1934 was 546,743 bbls., which compares with 885,085 bbls. in 1933, and 1,001,387 bbls. in 1932.

Albany County

California Co.'s No. 1 Holst, NE SE SE Section 13-17-77, a wildcat on the Quealy Dome, 20 miles northwest of Laramie and near the Carbon County line, is listed as a completion ,and opens a new pool. It was completed in the Muddy sand at 3,146-75 feet and pumped 60 bbls. the first 24 hours through the 2½-inch tubing. It started off at 8 bbls. an hour, but soon was pumped down. This is the first Wyoming structure to be drilled on a siesmograph high, John H. Wilson, of Denver, having made the survey. A test drilled by the Matador Petroleum Co. (Roxana) in the NW NE Section 13, a number of years ago, had water in the Muddy and Dakota and was abandoned at 3,600 feet. Texas Co. drilled in the NE NE Section 17 and lost the hole in the Mowry at 3,574 feet after getting water in the Frontier.

Big Horn County

Peter Evanoff and others' No. 1 Griffin, Lot 60, Section 4-55-97, Garland Dome, is drilling out plug to compelte as a gas well after cementing the 9⅝-inch at 1,550 feet. Total depth is 1,665 feet. Same interests have rig up for No. 2 Griffin, Lot 53, Section 28-55-97. This test will go to the Madison. Sidney H. Keoughan has the contract. The No. 1 Griffin was intended as a deep test, but it was decided to stop when a flow of 10,000,000 feet of gas a day was encountered in the Frontier. Ohio Oil Co.'s No. 1 Hoskins, SW cor. Section 14-56-97, Byron Dome, is drilling at 2,627 feet.

Carbon County

Argo Oil Co.'s No. 1 Johnson-Union Pacific, NE cor. SE Section 5-24-87, O'Brien Springs Dome, showed oil and gas saturation in cores from the Dakota at 3,172 feet, total depth, and it was decided to stop and test. The 9⅝-inch was set at 3,170 feet, on top of the sand, and it is changing over to cable tools to drill in.

Ohio Oil Co. and California Co.'s No. 1 Kyle, NE SE NE Section 26-21-79, Medicine Bow, set the 15½-inch at 391 feet and is drilling at 435 feet, and the Ohio Oil Co.'s No. 1 Morris, C NW SE Section 6-20-77, Diamond Dome, is drilling in the top of the Muddy at 5,150 feet with no shows of oil or gas. Earl W. Redder, Inc.'s No. 1 Union Pacific, C SW SW Section 19-20-83, Overland Dome, is drilling at 5,860 feet and has another show of light oil. Same company's No. 1 Whitford, SW SE SE Section 24-20-84, is drilling at 2,200 feet. Sinclair-Wyoming Oil Co.'s No. 4 Wertz, SW cor. SE Section 7-26-89, Wertz Dome, is bottomed at 3,528 feet and fishing for lower part of swab and swab rubber.

Converse County

E. B. Jones' No. 1 Teakell, S half Section 17-32-69, Shawnee Creek district, which was drilled for gas for fuel for deep test, was completed as a gas well at 510-65 feet. It has been connected with the boilers for his No. 1 State, SW cor. Section 16-32-69, and last named is spudding. Otto Olston and others' No. 1 Carey, Section 6-32-74, Box Elder Basin, which has been idle for the past few years, has resumed and is drilling at 510 feet.

Fremont County

Nelson & Pouppiert's No. 5, SW SE NW Section 27-3n-1w, Pilot Butte, was completed for 1½ bbls. initial at 820 feet. Mid-American Oil Co.'s No. 2 Government, C NE SW Section 14-28-92, Sheep Creek, after plugging back from 500 feet to straighten hole, set the 15½-inch at 70 feet in new hole.

Hot Springs County

California Exploration Co.'s No. 1 Government, NE SE NE Section 12-44-97, Waugh Dome, is drilling at 3,650 feet and is not yet in the Embar. The top of the red beds was at 2,335 feet and the Embar is expected at 3,700 feet.

Lincoln County

Senrab Oil Co.'s No. 3 Government, SE NW Section 10-26-113, La Barge district, is drilling at 995 feet. The 6¼-inch was run to 974 feet. Water is in the hole from a split joint.

Niobrara County

Interstate Oil & Refining Co.'s No. 1 Morrell, NW NE SE Section 2-39-61, West Mule Creek, is reported drilling at 2,955 feet, below the old depth of 2,812 feet where it encountered a good show of oil.

Park County

George T. Beck's No. 1, NW SE NW Section 27-53-101, Cody Dome, is drilling at 1,181 feet.

Washakie County

Chris Oil Syndicate's No. 1 Government, C SW SW Section 31-48-90, Hidden Dome, set the 8¼-inch at 1,570 feet, and is waiting. It had a show of oil with water in sand at 1,510-50 feet.

Sweetwater County

Sinclair-Wyoming Oil Co.'s No. 54-A, NW SW Section 11-26-90, Lost Soldier, an old well deepened from 412 feet, was recompleted at 570 feet for 60 bbls. of oil and no water the first 24 hours and 100 bbls. in the second period. Its No. 46-A, SE cor. Section 3-26-90, was deepened from 1,782 feet to 1,924 feet without showing any increase. It is suspended until spring.

MONTANA

Glacier County

Two completions and two new locations were reported in the Cut Bank Field. R. C. Tarrant's No. 3 Miller, E NE NE Section 24-34-6w, was drilled to 2,865 feet, and swabbed 75 bbls. the first 24 hours from pay at 2,820-32 feet. The three Tarrant wells on the Miller lease show some interesting comparative results. No. 1, C NE NE Section 24, was completed in the fall of 1932 as a flow-

(Continued on Page 81)

TECHNICAL QUESTIONS ANSWERED

By Charles K. Francis, Ph. D., Technical Editor

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible.

Inquiries must be signed but only the given initials will be printed. The source of the question is considered to be confidential.

Questions requiring a discussion of patents, the use of intricate formulas, extended computations, or cost estimates cannot be considered.

When the matter is of general interest the reply will be published within a reasonable time.

Natural Gas Consumption Cost and Selling Value

What states consume natural gas? What is the total volume, cost, and selling price?—T. H. R.

According to the U. S. Bureau of Mines, there are 35 states, the District of Columbia and Alaska, where natural gas is consumed; the only states that do not use it are the six New England states, South and North Carolina, Delaware, Oregon, Nevada, Idaho and Wisconsin. During the year 1932, the quantity of natural gas produced and delivered was 1,555,990,000 feet. This gas was valued at the wells from 2.1 cents per 1,000 feet in New Mexico, to 29.6 cents per 1,000 feet in New York, and the average value of all gas produced for the United States was 6.4 cents per 1,000 feet. The value at points of consumption ranged from the low of 8.9 cents per 1,000 feet in Oklahoma to 103.8 cents per 1,000 feet in New York; the average for the United States being 24.7 cents. The estimated total value of natural gas at the wells was $98,985,000 and at the point of consumption $384,123,000. These figures are from the U. S. Bureau of Mines report for 1932 and the summary as published in The Oil and Gas Journal, October 25, 1934, page 167.

Pour Points Reliable Only When Determined by Standard Test

Will the pour test rise on a fuel oil with prolonged storage? We have had a case where the pour test rose from 35° to 45° F. during transit and storage over a two month's period. I am not positive that the rise was not due to experimental error in making the test.—B. C. R.

If there is no change in the composition of the oil, the pourpoint will remain constant.

It seems to be a fact that when any considerable differences are obtained for pour tests of the same oil that the procedure according to the standard A.S.T.M. test method has not been followed in every particular. It is surprising what difference an apparently unimportant change in the procedure will make in the result. The standard method is that of the American Society for Testing Materials designated D97-34. This method was issued as a tentative in 1921 and finally adopted in 1928 and has been revised three times since then. Attention is called to these revisions simply to indicate that the method is not so simple as one would be liable to conclude. Ordinarily the test is subject to a tolerance of 5° F., so it would not be difficult to obtain a report showing a difference of 10°, particularly if both operators were not extremely careful to observe the details of the standard test.

The A.S.T.M. Standard on Petroleum Products and Lubricants prepared by Committee D-2 published September, 1934, gives the full details for making the pourpoint determination beginning at page 53 and on page 59 a precaution is stipulated as follows:

"Special Procedure for Black Oils and Cylinder Stocks:

"(a) In those cases where it is known that a sample has been subjected to some temperature higher than 115° F. during the preceding 24 hours, or where the history of the sample in this respect is not known, the sample shall be held in the laboratory 24 hours before testing, unless three consecutive tests of the same sample in the same test jar give check results. For these particular oils, results obtained by one or the other of the alternative procedures shall be called the upper (maximum) pourpoint.

"(b) The lower (minimum) pourpoint shall be determined by heating a sample with stirring to 220° F. The oil shall then be poured in the test jar, cooled to 90° F. as before, and the pourpoint determined as described in Section 11.

"(c) The upper and lower pourpoints shall be reported separately."

Formulas for Calculating Fuel Values of Oils

What is the method used for calculating the heating value, B.t.u. per pound, of fuel oils? Is the value obtained this way reliable?—W. D. B.

The heating value of a fuel oil may be determined by means of several formulas, which are reliable if the oil is reasonably pure; that is free from water and large quantities of solid material. The gravity is used in all, so anything which will interfere with a close determination of gravity will consequently influence the final B.t.u. obtained by the calculation.

The American Society for Testing Materials, in the special report of Committee D-2, entitled The Significance of Tests of Petroleum Products, mentions five formulas as follows on page 42:

"It has been noted that the thermal value of any given type of fuel oil varies in linear relationship with the A.P.I. gravity of the product. This has led to the development of numerous formulas for calculating thermal value most of which take the general form:

$$\text{B.t.u. per pound} = A + B \times \text{A.P.I. gravity}$$

"The oldest and probably the best known is that of Sherman and Kropff. The original equation was as follows:

$$\text{B.t.u. per pound} = 18{,}650 + 40 \times (\text{gravity, deg. Baume} - 10)$$

"This can be expressed more conveniently in the following form, which disregards the possible small difference between the Baume scale and the present standard A.P.I. gravity scale:

$$\text{B.t.u. per pound} = 18{,}250 + 40 \times \text{A.P.I. gravity}$$

"The Sherman and Kropff equation, though still widely used, is generally recognized to be unsuitable for present-day heavy fuel oils. Faragher, Morrell and Essex have reviewed this field and have proposed the following equation for cracked fuel oils:

$$\text{B.t.u. per pound} = 17{,}645 + 54 \times \text{A.P.I. gravity}$$

"This is in fairly close agreement with the following equation proposed in an unpublished report of the Naval Boiler Laboratory, Navy Yard, Philadelphia, Pa. (Lybrand P. Smith, May, 1933):

$$\text{B.t.u. per pound} = 17{,}687 + 57.9 \times \text{A.P.I. gravity}$$

"The National Bureau of Standards Miscellaneous Publication No. 97 entitled, 'Thermal Properties of Petroleum Products,' (1929), contains a table which gives thermal values of oil in terms of gravity."

References—H. C. Sherman and A. H. Kropff, "The Calorific Power of Petroleum Oils and the Relation of Density to Calorific Power," Journal Am. Chemical Soc., Vol. 30, p. 1,626 (1908). W. F. Faragher, J. C. Morrell and J. L. Essex, "Relationship Between Calorific Value and Other Characteristics of Residual Fuel Oils and Cracked Residuum Oils," Industrial and Engineering Chemistry, Vol. 21, p. 933 (1929).

Steam Cylinder Lubricating Oil Federal Specifications

Can you furnish a set of reliable specifications to cover a pure cylinder oil; that is, one not containing any fatty oils?—D. C. E.

The recently proposed VV-O-611 grade of the Federal specifications for mineral steam cylinder oil, superseding a similar grade published in 323B, Bureau of Mines, October 21, 1927, is the most reliable that is available. The specification limits are:

Specification Limits—Mineral steam cylinder oils shall comply with the following requirements.

This is a proposed revision, subject to further modification by the Government.

Test—	Limit— Grade 1	Grade 2	Test number— F.S.B.*	A.S.T.M.
Viscosity, Saybolt Universal sec. at 210° F.	135–165	180–220	30.43	D88-33
Pourpoint, °F. (max.)	60	60	20 14	D97-33
Flashpoint, °F. (min.)	490	525	110.33	D92-33
Precipitation number (max.)	0.05	0.05	310.11	D91-33
Ash, per cent (max.)	0 05	0.05	542.1	.....
Carbon residue, per cent (max.)	3.0	4.0	500.13	D189-30
Reaction test	neutral	neutral	510 1	.....
Neutralization number (max.)	0.15	0 15	510.31	D188-27T
Corrosion	none	none	530.31	.....
Water, per cent	none	none	300.13	D95-30
Fatty oil content, per cent	none	none	540.11) 540.21)	D95-33

*Federal Specifications Board.

Formula For Variation of Engine H.P. With Altitude

We are in need of a formula for expressing the reduction in operating engine H.P. with increase in elevation and would very much appreciate anything you may have on the subject.—B. D.

The summary of a paper presented by R. F. Gagg and E. V. Farrar before the Society of Automotive Engineers published in Automotive Industries, September 9, 1933, includes a formula of this type. The title of the paper was "Aircraft Engines Equipped With Gear-Driven Superchargers." The formula is:

$$Hp = Hp_o \left[\frac{P}{P_o} - \frac{\left(1 - \frac{P}{P_o}\right)}{7.55} \right]$$

where P is the atmospheric density at altitude A;

P_o atmospheric density at sea level;

Hp, the brake horsepower at any altitude A;

Hp_o, the brake horsepower at sea level.

A curve plotted from this eqquation shows the horsepower decreases 10 per cent at 3,000 feet above sea level; 20 per cent at 6,350 feet; 30 per cent at 10,000 feet; 40 per cent at 14,000 feet; 50 per cent at 18,300 feet, and 53 per cent at 20,000 feet.

The paper describes a comparatively simple method of determining the altitude performance of conventional aircraft engines in the range from sea level to 20,000 feet, without the use of an altitude laboratory.

The variation of brake horsepower with altitude is a straight line relation when plotted against atmospheric density ratio $\frac{P}{P_o}$ and falls to 47 per cent of the sea level value at 20,000 feet.

The variation of manifold pressure with altitude is a straight line relation when plotted against atmospheric density ratio $\frac{P}{P_o}$ and falls to approximately 47 per cent sea level value at 20,000 feet.

A manifold pressure curve with reduced carburetor air inlet pressure and sea level exhause may be run and extrapolated to sea level density to obtain a hypothetical full-throttle sea level manifold pressure.

The brake horsepower at sea level with the above hypothetical manifold pressure may be obtained from an extrapolation of the curve of brake horsepower at sea level versus manifold pressure, and the brake horsepower at any altitude determined from the equation presented.

FIELD PROBLEMS FROM READERS

Edited by Thomas F. Smiley

This department is conducted in order that men connected with the drilling, producing and transporting branches of the petroleum industry may obtain aid in solving problems that confront them in their work. Readers are invited to send questions freely. These questions will be placed in the hands of persons capable of answering them authoritatively, and the answers, based on the best available information, will be published.

Each question should give as much detail as possible, especially if it involves depths of sands, types of sands and operations on adjoining or nearby properties. The source of questions will be considered confidential, and only the initials of the sender will be published. Questions involving patented processes, intricate formulas or estimates of cost cannot be answered. If an immediate answer is important, one will be given by mail when the writer requests it.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or improved old ones.

Estimating Porosity, Saturation and Recovery of Oil Land

In connection with a repressuring program on a lease in this county I desire to make estimates on the porosity, saturation and recovery per acre. I understand there has been developed a rapid method which will allow these calculations to be made on the derrick floor, but I have not been able to find complete details about it. Can you inform me where I can get information about these tests? In your opinion would tests run from cuttings (cable tool) be anything like as reliable as those run from cores? It has occurred to me that the method of automatically flowing production might be no more expensive to equip and much more satisfactory to operate on a shallow lease under repressuring conditions than the old system of jacks, etc. Have you any information on this method of producing oil from shallow wells?—W. E. S.

You mention porosity, saturation and recovery per acre but there is one other very important factor you have not mentioned, permeability.

"Permeability may be defined as that property which permits liquids and gases to pass through a porous substance," says C. M. Nevin in "Problems of Petroleum Geology." "It is distinct from the penetration of liquids by adsorption. Until a liquid has penetrated through an oil sand, as may be demonstrated in the laboratory, the rate of flow is caused by a combined differential pressure and capillary action; but, after penetration is complete, the rate of flow is governed by differential pressure. This rate of flow is a measure of the permeability of the material.

"The measurement of permeability is somewhat difficult, but, during the past two years methods have been developed by which the permeabilities of a series of reservoir rock samples may now be determined by different investigators and expressed on a comparable basis. There is a great practical need for systematic research on the permeabilities of reservoir rocks and their relation to well spacing, initial production and total recovery.

"Since the rate of flow is a measure of permeability, and since it is now possible to secure accurate subsurface pressure data in a producing well, it seems that we have here a method of estimating the permeability of the sand face far below the surface of the ground. In all permeability measurements it is important to know the amount of differential pressure which is causing the flow, and the type of flow, whether it is viscous or turbulent. If of the viscous type, which most settled oil production is, the rate of flow is directly proportional to the differential pressure, other factors remaining constant; that is, double the differential pressure and the rate of flow will double. Fortunately, the differential pressure which is causing the flow of a producing well can now be accurately obtained by measuring the bottom hole static pressure and subtracting from it the bottom hole flowing pressure."

In regard to coring, it is suggested that you refer to an article by L. G. E. Bignell, "Laboratory Study of Cuttings and Cores Helps," in the August 9, 1934, issue of The Oil and Gas Journal, and an article by Wallace A. Sawdon, "Knowledge of Formation Characteristics from Cable Tool Cores," in The Oil and Gas Journal, February 22, 1934. This latter article will inform you about the method to follow to get good cores with cable tools.

After the cores are obtained a chemical laboratory can give you a report upon permeability and you can have a check made at the well for formation pressures and differentials and with this knowledge at hand you should be in position to map out a repressuring program that will get the desired results.

Your problem evidently is to find means of increasing differential pressure between the formation and the output well and causing the oil to flow at a higher rate. The problem of lifting this oil to the surface can then be considered, but until the rate of flow is increased little is to be gained by improving lifting methods.

It is suggested that you obtain a copy of "Problems of Petroleum Geology," published by the American Association of Petroleum Geologists and selling for $6. This book contains a chapter devoted to a discussion of "Porosity, Permeability and Compaction" which will be of much interest to you.

Raising Oil From Well in "Slugs" by Using Gas-Lift Principle

I read an article in some oil publication quite a while ago that referred to experiments being made with an invention designed to raise oil from the well without the use of rods. By using gas as the lifting agent the idea was to raise the oil in slugs. Can you tell me whether this invention ever has been put into practical use and can you tell me how it operates?—E. N. E.

The oil-recovery process to which you refer employs the gas-lift principle. There are several new devices now in use with a view of perfecting the process. The subject was discussed as follows in a paper prepared by T. W. Rhoads and J. M. Cooper, both of the Gulf Production Co.:

"A variation of the gas-lift principle is that which raises the oil in 'slugs.' Two of these devices, which are still in the experimental stage, use a double string of tubing, one inside the other, with a set of float-operated valves in a pump chamber at the lower end of the tubing. Gas is forced down through the annular space between the tubing strings and when the chamber is filled with oil a valve is opened and a slug of oil blown out through the inner string of tubing. The valve is then closed by the float, and the pressure in the chamber vented into the casing. The chamber is then allowed to fill again and the process repeated.

"A third device utilizes a plunger traveling the full length of the tubing to separate the actuating gas beneath it from the slug of oil above it. A valve in this plunger opens after the oil above it has been discharged from the tubing, and the plunger then drops through the tubing and picks up another slug of oil. This device, which has undergone thorough testing for several years, has proved successful on certain types of wells, but has one disadvantage in that the tubing must be reamed to give the proper clearance for the plunger.

"Another device similar in principle to this one, but employing a plunger that will operate in unreamed tubing, is now in the experimental stage.

"The chief advantage of these slug-lift devices lies in the fact that they will operate at low pressure, the pressure depending not on the depth of the well but on the length of the slug, which is controlled at will by the operator."

Why Was It Called That?

KINGFISHER

Kingfisher, a county in Oklahoma, which long has been the scene of wildcatting operations thus far unproductive, was named from Kingfisher Creek. The creek got its name from King Fisher, a pioneer plainsman who conducted a store on the old Chisholm cattle train, along with a station for the accommodation of stage passengers. Two post offices in the western part of the county were called Alpha and Omega. Alpha, the first, is now nonexistent, but Omega, the last, still boasts a population of some 200 souls. Sheridan and Sherman are two other post offices in the county.

Various Factors May Enter Into Differences in Types of Crude

Different oil fields produce different types of oil in point of gravity, color, base and the percentage of various derivatives, such as gasoline, kerosene, naphtha, etc. What is it that makes these differences? Why don't we get the same kind of crude in Pennsylvania that we get in Smackover?—S. T. E.

Your question opens up a wide field for discussion and for speculation. It involves the theories offered as to the origin of petroleum. Crude oil in its underground reservoir has been undergoing an evolutionary transformation throughout the centuries, and presumably there are many reasons for this transformation. Leaving out of consideration the substances which may enter into the composition of petroleum, scientists name the depth of the oil-bearing stratum and its age as important factors. Other factors, such as gravitational differentiation, may affect oils locally and cause them to diverge from the normal character of crudes in their respective depths and ages. In a paper on the natural history of Gulf Coast crude oil published by the American Association of Petroleum Geologists in its volume "Problems of Petroleum Geology" Donald C. Barton says:

"The importance of depth in producing an actual change in the crude oil is plainly a justified deduction from the graphs of depth versus composition, for the tendency for the increase of the content of the lighter constituents with depth is manifested by all three of the age groups of oils, Miocene, Oligocene and Eocene. The predominant factors which presumably must compose the depth factor are temperature and pressure. Both increase with depth and both are used artificially in the refinery to change the character of oil. The pressures at only moderate depth are high in terms of pressure in the refinery. The temperatures even at considerable depth are not very high even although they are higher than at the surface, but it is a rather common, but not universal rule, that many chemical reactions and processes are speeded by increased temperature.

"The importance of the time factor in the evolutionary transformation of the crude oil in the Gulf Coast is a plainly justified deduction from the age versus character graphs of the variation of the Gulf Coast oil. Some factor or factors are producing a change in the character of the crude oil and the effect plainly is more or less proportional to the time throughout which the factor or factors have been acting on the crude oil.

"Time, temperature and pressure are a group of factors which are more or less interchangeable in many types of chemical processes; a high temperature acting for a short time may produce the same effect as a lower temperature acting for a longer time and similarly with pressure in reference to time and also in reference to temperature. Changes which become evident only at great depth in the normal Miocene oil become evident at progressively shallower depth in the Oligocene and the Eocene oils; as, for example, the 5 per cent content of gasoline in the Miocene oils should come at a depth of about 6,000 feet, in the Oligocene oils at 4,200 feet, and the Eocene oils at 1,400 feet. Kerosene is not found in the Miocene oils down to 6,000 feet, and the data do not show at what depth it should first come in."

NATURAL GAS DEVELOPMENTS

New York-Pennsylvania Gas Field Developments

PORT ALLEGANY, Pa., Dec. 17.—Gas field operations in North Central Pennsylvania and Central New York reflected weather conditions during the week ending December 14. There were two completions, both in the Hebron Field in Potter County. Penn United Gas Co. got an 8,300,000-foot producer at 4,893 feet on the Lycoming, Burt & Lyman property. Lycoming Producing Corp. brought in its O. W. Greenman at 5,270 feet, estimated at 22,000,000 feet. Top of the Oriskany was 5,263 feet.

North Branch Development Co. shut down its No. 1 Chloe Kenyon, Hebron Township, Potter County, at 5,235 feet. Top of the Oriskany was 2,226 feet, and first gas, estimated at 22,000,000 feet, at 5,228 feet. Another heavy producer shut down is Bayliss Natural Gas Co.'s No. 1 Earl Pye, at 5,144 feet. Oriskany was at 5,134 feet, production estimated 35,000,000 feet.

Barket and others' U. B. Russell, Genesee Township, Potter County, is still shut down at 2,000 feet. North Branch Development Co. is shut down at 3,658 feet on the George Doty farm, Hector Township. Cunningham Natural Gas Co. is drilling at 4,865 feet on the George Carroll farm, Oswayo Township. Electro Geometer is shut down for engine repairs and will drill in the first of the week at its No. 1 Katherine Currier, Allegany Township. Lycoming Producing Corp. is drilling at 3,460 feet on the W. H. Hemphill farm, Hebron Township.

Lycoming Producing Corp. is running casing at 5,205 feet on the William White farm, Hebron Township. The Onondaga was found at 5,182 feet. Lycoming is also drilling at 4,831 feet on the R. and G. Carmer farm, same township. Potter Development Co. is running casing at 4,942 feet on the B. L. Langworthy farm. Top of the Onondaga is at 4,928 feet. This company is still idle at its No. 2 Penn-Stave location, same township.

United Carbon Co. is moving on the

(Continued on Page 81)

TO INCREASE GAS OUTPUT

WASHINGTON, D. C., Dec. 17.—A plan to stimulate production of natural gas may be a by-product of the administration's power program. That energy available from natural gas equals if not exceeds that from electricity was disclosed by the Federal Trade Commission in its utility investigation. This probably will be the basis for recommendations to the President.

The potential power from gas may be only vaguely estimated, but some officials believe there are tremendous fields that have been scarcely tapped and whose development would tend to bring both lower gas and electric rates.

Government experts believe that were the opportunity offered it would move ahead rapidly.

MISSISSIPPI LINE

Construction work is under way on the 20-mile pipe line from Aberdeen to West Point, Miss., which will take additional gas from the Monroe, La., gas field to supply consumption needs of the Aberdeen, Amory and Tupelo areas of east Mississippi. The line became necessary following the dropping of pressure and yield in the small Amory gas field of Monroe County, Mississippi. The line is being laid by the Amory Gas Co. and will connect with the trunk line of the Southern Gas system, near West Point, Miss.

Oklahoma Natural Company Introduces Innovation in Customer Relationship

An outstanding example of public relationship work designed to establish understanding relationship between a utility company and its customers is offered by the Oklahoma Natural Gas Co. of which R. W. Hendee is president.

Customers were surprised during the month to receive the following letter from their gas company:

Dear ————,

You will be pleased to know that for the 12 months (year) ending ————, your total gas consumption was ——— cubic feet, for which you paid us ———. For an average of ——— per month, you have had the advantage of a clean, convenient and dependable fuel service.

Statistics compiled over a period of several years tell us that by eliminating grease and smoke, this clean burning fuel saves many dollars on the cost of interior decorating and that its convenience saves many hours of valuable time, and many tiresome steps.

Tulsa's gas rate has been reduced 21 per cent since 1931, and you are enjoying one of the lowest natural gas rates in the United States.

It is our desire to serve you in a manner that would insure your continued use of our dependable, economical, gas service and we will appreciate, at any time, your constructive criticism and suggestions. We truly appreciate your patronage.

Yours very truly,

J. A. RAY,
District Manager.

JAR:PS

Accompanying the December bill was the following instructive folder:

"The following facts are submitted for your information and convenience, and should be considered during the winter months when you pay the largest portion of your annual bill.

"If you were preparing an annual household budget, how much would you include for fuel; and what per cent would you allocate to the various months? A survey of past records show the average customer pays the following percentages of his annual gas bill in the months named:

	%
January	19.2
February	15 7
March	13.8
April	11 3
May	6.1
June	3.1
July	2 4
August	2 3
September	2.4
October	3.5
November	7.7
December	12 5

GAS DOES NOT COST—IT PAYS!

"If your bills were equally divided into the 12 months you would pay 8.3 per cent each month.

"If you are an average consumer, you pay one-fifth of your annual bill in January, while in August you pay only one-forty-fourth.

"Your gas service cooks your meals, heats your water, and keeps your home comfortable in winter, at a very low annual cost. Protect the health of your family by maintaining uniform and proper temperatures in your home. No other commodity offers more convenience at lower cost!"

The reaction among customers of the Oklahoma Natural Gas Co. has been wholly favorable to the company. Some of the comments recalled in contrast former experience with gas companies in the earlier days when the relations between the consumers and the utilities were constantly embittered by a "public-be-damned" attitude at the gas company office and a "the company is always right" attitude behind the windows. The personal touch in the letter of the Oklahoma Natural company citing the consumer's own bill for the year made it intimate interest.

Michigan Gas Pipe Line Purchase Up This Week

MUSKEGON, Mich., Dec. 17.—Negotiations between the West Michigan Consumers Co., industrial natural gas pipe line operators, and the Muskegon Gas Co., domestic and commercial pipe line operators, for purchase of at least part of the former company's line to the Muskegon oil field by the latter concern are expected to be completed this week.

Formal hearing on an emergency connection between the two systems made December 6 to augment the West Michigan's supply of about 2,000,000 feet a day from the old Muskegon Field with enough additional from the Mecosta County gas field to supply Greater Muskegon industries was to be held before the Michigan Public Utilities Commission Wednesday, December 19.

Prior to the hearing, directors of the West Michigan concern were to hold a special meeting to consider the purchase proposal of the Muskegon Gas Co., subsidiary of the American Light & Traction Co., of New York City. The emergency connection was established when three major industries were forced to shut down for several days for lack of gas because of increased operations since December 1.

Daily sendout of the Muskegon Gas Co., which Monday, December 10 completed the changeover from artificial to natural gas received through a new 52-mile 8-inch line of the American-Michigan Pipe Line Co. built at a cost of $500,000 from Austin Township, Mecosta County, has increased to more than 1,500,000 feet. Up to 250,000 feet a day has been furnished to the West Michigan company during peak hours.

Final adjustment of burners was expected to be completed December 18.

DALLAS INVESTIGATION

DALLAS, Tex., Dec. 17.—Declaring he had examined gas franchises and ordinances of 88 leading cities of the United States and only those of Fort Worth and Dallas failed to stabilize the pressure and B.t.u. content and prohibit dilution of natural gas, Mortimer Jones of Fort Worth, gas engineer, addressed a meeting of civic leaders here.

Jones, employed by the Associated Civic leagues west of the Trinity to direct an investigation regarding diluted gas coming into the mains of Dallas, also declared the Dallas supply contains about 22 per cent of nitrogen gas, which he said is incombustible and useless. He told of a fight in Fort Worth which culminated in the adoption of an ordinance prohibiting the dilution of natural gas.

Gas Rate Decision Hailed by Missouri Commission

KANSAS CITY, Mo., Dec. 17.—The action of the Missouri Supreme Court upholding a divisional opinion placing jurisdiction of industrial gas sales by the Cities Service Gas Co. under the Missouri Public Service Commission for rate regulation, gives the utility control body an important weapon, according to commission experts who said this action was more important to control of pipe line utilities in Missouri than was the refusal of the court to support the contention of Justice Ernest S. Gantt, that distributing companies such as the Kansas City Gas Co. were mere delivery wagons for the pipe lines in contracts for sale of industrial gas through the mains of the city distribution system.

The opinion gives jurisdiction to the commission to regulate industrial rates of the pipe line company on all direct contracts with industries. The commission already had jurisdiction over industrial sales made by the Kansas City Gas Co.

The opinion ruled the Cities Service Gas Co. was operating in intrastate commerce in its industrial sales and should file its rate schedules and rules with the commission. It was pointed out that if the commission had jurisdiction to inquire into industrial rate schedules it could and probably would obtain information upon which to determine the fairness of the 40-cent gate rate.

Judge Gantt pointed out in one section of the opinion adopted by the court that the pipe line had by its own acts set itself up as a public utility when it took advantage of the right of eminent domain extended to public utilities to condemn right of way for its pipes.

The commission also will look into the record of its investigation of the industrial sales of the Mississippi River Fuel Corp., a pipe line operating to St. Louis from Louisiana fields. This investigation about a year ago brought out, however, that the Mississippi company had not taken advantage of the right of eminent domain in acquiring its right of way, but the commission believed it also would come under its jurisdiction for regulation of rates.

Coal Company Seeks to Enjoin Natural Gas Use

IOWA CITY, Iowa, Dec. 17.—Suit to enjoin the use and excavation of Iowa City streets to install distributing facilities for natural gas was filed in Johnson County District Court here by George Johnson, owner of the Johnson Coal Co.

Johnson alleged that the action of the Iowa City council in directing the Iowa City Light & Power Co. to bring in natural gas was illegal and that the company could not use the streets without a franchise.

Alderman Jacob Vander Zee is of the opinion that the suit permanently blocks the natural gas project. City Attorney Thomas Martin has ruled, however, that the action of the council is not of any force or effect because the proposal to bring in natural gas was defeated in the last city election. Before the council can give such permission to occupy the streets for bringing in natural gas, another election must take place, he said.

Right of using the county road right-of-way to lay pipes was denied by the Johnson County board of supervisors some time ago, and the company has been unsuccessful in obtaining a franchise over private property to bring in the gas.

PERSONAL PARAGRAPHS

A. McD. GRAY, of the Gray Process Corporation, is now making an inspection trip through the Mid-Continent area.

* * *

I. E. WILD, Mid-Continent sales manager of the Star Manufacturing Company, has opened offices in Tulsa. T. F. AHLERS is salesman for the Kansas territory, with W. A. SCOTT covering Texas.

* * *

F. M. BANKS, of the Southern California Gas Company, has been appointed a vice president of the company and placed in charge of sales. In his new capacity Mr. Banks will make his headquarters at the office of the company in Los Angeles, Calif.

* * *

CHARLES F. BEDFORD, petroleum engineer, Stanolind Oil & Gas Company, Tulsa, has been elected chairman of the Young Engineers Club of Tulsa, and is succeeded as vice chairman by JOHN HEMPHILL, engineer, Sinclair Prairie Oil Company, Tulsa.

* * *

PROFESSOR DR. ING. E. N. TERRES has been appointed manager of the United States branch of the Edeleanu Company, Ltd., with offices in New York. Formerly managing director of the Edeleanu Gesellschaft m.b.H., Berlin, Germany, he will succeed O. P. COTTRELL, who is leaving the Edeleanu company December 31.

* * *

O. D. CAREY, of Lincoln, is the new president of the Nebraska Petroleum Marketers, Inc., succeeding RAY OGIER of North Platte. His aids are T. H. MURPHY, Greeley, as first vice president; H. V. GRANTHAM, Kearney, second vice president, and PAUL ENGLOR, Bassett, and EARL T. MEAD, Scottsbluff, as directors.

* * *

EDWARD SWEARER, oil operator of Wichita, Kans., was in Tulsa last week.

* * *

CARL FORD, an oil operator of Enid, Okla., spent several days in Tulsa last week.

* * *

PAUL LYON, chief scout for Stanolind Oil & Gas Company, Tulsa, is on vacation, DON RYAN substituting.

* * *

H. E. BALL, of the Shell Petroleum Corporation, mechanical engineering department, Tulsa, has returned from his vacation.

* * *

D. F. VICKERS, in the sales department, for Sinclair Refining Company, at Fort Worth, Tex., was a business visitor to the company's office at Houston, Tex., the past week.

* * *

GLEN E. THOMPSON, with the Tide Water Oil Company, and J. C. WALLINGFORD, of the Amerada Petroleum Corporation, both of Tulsa, were in Dallas, Tex., during the week.

* * *

G. H. HALBMANN, with the Sinclair Refining Company at Fort Worth, Tex., has been transferred to the company's office at Houston, Tex., and promoted to district assistant sales manager.

* * *

J. H. McLAREN, land man and scout for the Phillips Petroleum Company for the Gulf Coast division, with headquarters at Houston, Tex., is spending a two weeks' vacation at his home in Graham, Tex.

GEORGE W. QUALLS, assistant purchasing agent of the Oklahoma Gas & Electric Company, of Oklahoma City, Okla., was a visitor in Tulsa last week.

* * *

E. L. DELANEY, a member of the Union Oil Company's staff at Bakersfield, Calif., deserted the ranks of the batchelors a few weeks ago, having been married in Los Angeles.

* * *

DR. W. J. McGILL is now general superintendent of the Wood River, Ill., refinery of the Standard Oil Company (Indiana). He was previously assistant general refinery superintendent.

* * *

RALPH B. ROARK, production manager, and W. H. MORRIS, chief engineer, Shell Petroleum Corporation, have returned home from a tour of the Lucien, Oklahoma City and Panhandle fields.

* * *

WHEN the governors of several oil-producing states convene again in Ponca City, Okla., on January 3, California will be represented by R. L. PATTERSON, W. H. COOLEY and STATE UMPIRE J. R. PEMBERTON.

* * *

BYRON MEREDITH, production superintendent of the Sinclair Prairie Oil Company, Eastland, Tex., has been transferred to the East Texas Field, and SLICK BASS has been moved to Eastland from East Texas. JACK JORDAN has been transferred from East Texas to Midland, Tex.

* * *

ALEXANDER DUESSEN, consulting geologist of Houston, Tex., and a past president of the American Association of Petroleum Geologists, spoke at the quarter centennial celebration of the University of Texas natural resources at Austin, on "Thirty-five Years of Progress in the Knowledge of the Geology of Texas."

OLAF ECHBO and JOHN WHINTER, representing oil interests at Oslo, Norway, recently completed a survey of oil field operations in California fields.

* * *

E. P. CAREY, general manager of sales for the Youngstown Sheet & Tube Company, Youngstown Ohio, has just completed a trip through the Southwest and Mid-Continent fields.

* * *

DOUGLAS BANKS, president of Empire Natural Gas, Ltd., of Toronto, Ontario, recently made an airplane flight to Trinidad, where he is inspecting some oil properties for his company.

* * *

NELSON A. ROCKEFELLER, son of JOHN D. ROCKEFELLER, JR., made an airplane survey of the East Texas Field during the week in company with a group of Dallas, Tex., oil and business men.

* * *

J. C. SIEGLE, general superintendent of the tubular department of the Youngstown Sheet & Tube Company, Youngstown, Ohio, and O. A. KOCHER, representative at Fort Worth, Tex., have just completed a field trip to West Texas and New Mexico.

* * *

H. K. PENNY, representative of Axelson Manufacturing Company, Houston, Tex., was appointed to take charge of that office December 1. Mr. Penny's previous experience has been in engineering and sales work in production of oil and gas and refrigeration machinery.

* * *

W. P. JACOBI, representing Wadhams Oil Company, White Eagle Oil Corporation, Lubrite Refining Corporation, and White Star Refining Company in Tulsa, Socony-Vacuum affiliated companies, has returned from a trip, visiting the northern headquarters of these companies.

* * *

M. P. (PAT) NORWOOD, of Enid Okla., oil scout and oil man, spent several days in Tulsa last week.

* * *

A. J. EDWARDS, sales manager for Black, Sivalls & Bryson, Inc., Tulsa, is spending a week in Texas and New Mexico on business.

* * *

RALPH STEINMAN, chief scout for the Sinclair Prairie Oil Company at Tulsa, visited the company's office at Houston, Tex., last week.

* * *

PERCY C. JONES, president of the S. M. Jones Company, Toledo, Ohio, was a guest at the dinner of the Gridiron Club in Washington, D. C.

* * *

H. D. GOBBLE, with the oil field division of Fairbanks-Morse Company at Chicago, was a business visitor to Houston, Tex., the past week.

* * *

W. H. WHITTIKIN, vice president and general manager of the Oil Well Supply Company at Dallas, Tex., was a business visitor to Houston, Tex., the past week.

* * *

J. H. JENKINS, vice president of the Associated Oil Company, with headquarters at San Francisco, Calif., was a business visitor in Houston, Tex., last week.

* * *

A. D. OTTO, formerly district manager for the Oil Well Supply Company at Houston, Tex., has been transferred to Dallas, Tex., and promoted to assistant manager of stores.

DO YOU REMEMBER?

From The Oil and Gas Journal Files

25 Years Ago

December 27, 1909

John Frederick Fisher, general superintendent of the Gulf Pipe Line Co., and Miss Caroline Hamilton were married on December 6 at Beaumont, Tex.

Texas Co. has moved into its new headquarters on the tenth floor of the Jones Building, in Houston, Tex.

Vice President Leovy, of the Gulf Pipe Line Co., moving from Tulsa to a higher position in Houston, was presented with a very beautiful cut glass set by employes of the Tulsa headquarters and a magnificent silver loving cup by members of the Tulsa Country Club.

20 Years Ago

December 17, 1914

Robert H. McGarvey, veteran refiner in American, Mexican and Sumatra oil fields, dies at Lakewood, N. Y. He had been in ill health two years.

The largest producers in the Cushing Field at this time are John H. Markham, Jr., 18,000 bbls. per day; Prairie Oil & Gas Co., 19,000 bbls.; Producers Oil Co. (Texas Co.), 17,850 bbls.; McMan Oil Co. (McFarland, Chapman and others), 40,700 bbls.; Kathleen Oil Co. (Sinclair), 18,395 bbls.; Devonian Oil Co., 13,500 bbls.; C. B. Shaffer, 15,000 bbls.; and Quaker Oil & Gas Co., 15,200 bbls.

D. C. Oldenborg, Jr., an oil man, writing from Jerusalem, Palestine, says the only machinery in that city is one Singer sewing machine and a few gas engines.

10 Years Ago

December 18, 1924

Fifty Siliceous lime wells in the Tonkawa Field in Oklahoma are producing 85,020 bbls. per day at $1.25 per barrel.

Bert Sage, Toledo, Ohio, oil man, shoots a 1,600-bbl. moose in the New Brunswick forest.

J. Elmer Thomas resigns as chief geologist for the Shaffer Oil Co. to organize a company of his own.

W. L. Kistler resigns as president of the Producers & Refiners Corp.

THOMAS D. PHILLIPS, executive secretary of the National Drilling Association, has returned to Tulsa from Washington, D. C.

* * *

CLAY TALLMAN, chief counsel of the Stanolind companies, Tulsa, left late last week for a business trip to Fort Worth, Tex.

* * *

W. J. ARMSTRONG, proration umpire of Oklahoma, spent three days in Tulsa last week conferring with Mid-Continent executives.

* * *

H. L. DAVIS, of Williams Brothers Company, has been made foreman for the western Kansas area with headquarters at Hutchinson.

* * *

DENNIS McGIRL is now drilling for oil in the Chelsa sector of northeastern Rogers County, Oklahoma. He makes his headquarters at Chelsa.

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O. M. MASON, president of the Michigan Gas & Oil Corporation, paid a brief visit to the company's offices at Mount Pleasant, Mich., recently on his way to New York, following an extended trip through Texas.

* * *

D. M. HAMMETT, district manager for the Mid-Continent area for Axelson Manufacturing Company, Tulsa, has just returned from the office of his company in Los Angeles, Calif., where he attended the annual conference of executives and field men.

* * *

G. W. WESTMORELAND, formerly chief clerk and warehouse man for the Humble Oil & Refining Company at Cameron Meadows, La., has been transferred to the company's Kittrell district at Trinity, Tex., to serve in the same capacity. He replaces W. L. CUPIT, who was transferred to the Thompson district.

* * *

WILLIAM HOLDEN has been elected executive vice president of the National Drilling Association. THOMAS D. PHILLIPS, executive secretary during the preliminary work of the organization and for the past year acting manager, will continue in that capacity.

* * *

GEORGE GODDARD, district superintendent for the Empire Gas & Fuel Company, Wichita Falls, Tex., has been promoted to assistant general superintendent of the company, and moved to the head offices at Bartlesville, Okla. AMES LAWRENCE, superintendent in the East Texas Field, has been made district superintendent and transferred to Wichita Falls to fill the vacancy made by Mr. Goddard's promotion.

* * *

W. K. ATCHESON, Pure Oil Company, has been nominated for president of the Petroleum Motor Transport Association of Oklahoma, succeeding C. E. JACKSON, Mid-Continent Petroleum Corporation; H. D. PATRIDGE, Indian Territory Illuminating Oil Company, vice president, Atcheson; C. L. BOWMAN, Shell Petroleum Corporation, second vice president, and L. E. SCHROEDER, secretary-treasurer, re-elected. Directors-elect are the officers and CHARLES RODY, H. L. ARMSTRONG and J. E. JOHNSON.

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WAITE PHILLIPS, Phillips Petroleum Company, and J. C. DENTON, general counsel, Mid-Continent Petroleum Corporation, Tulsa, were re-elected to the directorate of the Tulsa Chamber of Commerce last week, and C. H. LIEB, president, Carter Oil Company; NELSON K. MOODY, president, Sinclair Prairie Oil Marketing Company; EVERETT R. FILLEY, general manager, Oklahoma-Kansas production division, Texas Company; GEORGE S. ROLLIN, vice president, Shell Petroleum Corporation, and ERNEST KLAPPENBACH, advertising manager, The Oil and Gas Journal, all of Tulsa, are new members elected to this directorate who are interested in the petroleum industry.

Having Holiday After Long Service

H. S. Tims, for 22 years associated with the Canadian Western Natural Gas, Light, Heat & Power Company, of Calgary, Alberta, recently resigned as comptroller of the Canadian Western and associated companies and is spending a holiday in California. He expects ultimately to return to business in eastern Canada.

H. S. TIMS

A native of Perth, Ontario, Mr. Tims joined the Bank of Montreal staff in 1900. His first connection with the natural gas industry came in 1910, when he entered the service of the Volcanic Oil & Gas Company of Chatham, later merged in the Union Gas Company of Canada.

Mr. Tims went to Calgary in 1912 with Eugene Coste when the latter organized the Canadian Western Natural Gas, Light, Heat & Power Company formed to distribute natural gas from the Bow Island Field to Calgary and other southern Alberta communities. Mr. Tims was assistant treasurer of this company from 1912 to 1913; treasurer from 1913 to 1925; and manager till 1928.

In 1928 the International Utilities Corporation of New York, having acquired control of the Canadian Western and other public utility companies, established a head office in Calgary, when Mr. Tims was appointed comptroller of all the Canadian subsidiaries of the International, a position he continued to occupy. He was also on the board of directors of the various companies, which include the Canadian Western Natural Gas, Light, Heat & Power Company and Canadian Utilities, Ltd., of Calgary; Northwestern Utilities, Ltd., of Edmonton; Union Power Company of Drumheller, Alberta; Nanaimo Electric Light, Power & Heating Company of Nanaimo, British Columbia, and Duncan Utilities, Ltd., of Duncan, British Columbia.

L. M. KIPLINGER, cashier for the Rocky Mountain division of the Ohio Oil Company, is reported to be much improved in health and will return to his regular duties at the company offices in Casper, Wyo., about the first of the year. He has been confined to his home for two weeks as the result of a serious heart attack.

* * *

F. M. McGEHEE, with the Humble Oil & Refining Company, has been promoted to district superintendent in charge of the Hull, Sour Lake South Liberty and Anahuac districts. Mr. McGehee's headquarters will be at Hull, Tex., and all office and supervisory work pertaining to these districts will be handled through the Hull district.

* * *

JAMES JOHNSON, of Borger, Tex., superintendent of the Continental Oil Company, has been elected chairman of the Panhandle chapter of the American Petroleum Institute. WALTER BIERY of Pampa, was elected first vice chairman, and R. G. ALLEN of Pampa, second vice chairman. The retiring chairman was C. E. McGREW of Pampa.

* * *

M. K. TILLMAN has resigned from the Planning and Coordination Committee, and the appointment of WILMER R. SCHUH to the vacancy has been announced by ADMINISTRATOR ICKES. Mr. Tillman, whose home is in Highland Park, Ill., is past president of the National Association of Petroleum Retailers, while Mr. Schuh, who is a resident of Milwaukee, Wis., is president of the association.

* * *

A. H. BLACK, Kansas City; GLENN SKINNER and "DOCK" ROTH, of Tulsa; J. A. SIVALLS, Bartlesville, and G. RAYMOUND, of Oklahoma City; ED PETERSON and JOHN McCARTY, independent operators of Wichita Falls, Tex., and GEORGE KINNER, independent operator of Wichita, Kans., have returned from a week's encampment at the camp of Black, Sivalls & Bryson, Inc., about 50 miles from Broken Bow, in the Kiamichi Mountains of southeastern Oklahoma.

HENRY LANGSPECHT, chief scout of the Kansas-Oklahoma-Panhandle district of Shell Petroleum Corporation, was a visitor in Kansas last week.

* * *

J. M. McINTYRE, vice president and general manager for the New York Oil Company, left Casper, Wyo., last week for Chicago on company business.

* * *

GEORGE W. SHAFFER, secretary and treasurer of the Shaffer Specialty Company, visited the Robbins Pool and other oil centers in Kansas early in the past week.

* * *

JOHN BARTRAM, Rocky Mountain geologist for the Stanolind Oil & Gas Company, attended the recent sessions of the Colorado-Wyoming Academy of Science held at the School of Mines in Golden, Colo.

* * *

A. M. McCORKLE, vice president in charge of the southwestern division of the Stanolind Oil & Gas Company, and chairman of the Hobbs Pool Proration Committee, spent last week at Santa Fe, N. Mex.

* * *

P. M. MISKELL, general manager in charge of refineries for the Empire Oil & Refining Company, returned to Tulsa Saturday after spending a week in the New York offices of the Cities Service Company, and in other eastern company properties.

* * *

DEAN C. SHACKELFORD, assistant to the division material manager in the Pure Oil Company's Porter Township Field office in Central Michigan, was married December 8 to MISS LUCILLE CLARK, of Weideman, Mich. Mr. Shackelford is a graduate of Michigan State College.

* * *

J. E. DUCKHAM, a director of Alexander Duckham & Company, Ltd., has recently been elected to the board of Trinidad Central Oilfields, Ltd.

* * *

BRYAN J. TODD, general manager of the Associated Motorists Petrol Company, of New Zealand, is at present on a world tour, and will shortly be leaving New York to visit London, England, prior to touring the Continent and Russia.

* * *

JOHN BRYAN HALL, London, England, who for many years was manager of "Mobiloil" department of the Vacuum Oil Company, Ltd., and has just completed 30 years with the company, has retired on pension. On the occasion of his retirement he was presented by WILSON CROSS, chairman of the company, with an antique grandfather clock and a set of cocktail glasses.

* * *

ARTHUR HEWITT, formerly vice president of the Consumers Gas Company, of Toronto, Canada, has been elected president of that company succeeding A. W. AUSTIN, who died some months ago. The directors elected A. H. CAMPBELL as vice president, the office held by Mr. Hewitt since 1930. C. S. MacDONALD, president of the Confederation Life Association, was made a director, filling the vacancy created by the death of Mr. Austin.

* * *

HOWARD D. ATHA, head of the Gordon Oil Company and president of the Oil and Gas Association of Michigan during the past year, was re-elected to head the association at the annual meeting held last week in Mount Pleasant, Mich. DR. VIRGIL R. D. KIRKHAM, Saginaw geologist, was re-elected vice president, and ROBERT W. ATHA, Mount Pleasant drilling contractor, was re-elected secretary. GEORGE TALBOT, head of the Talbot Oil Company, was chosen treasurer, and C. A. CALVERT, of Saginaw, a Pure Oil Company executive, assistant treasurer.

MARKET RECORD OF OIL SECURITIES

Active Oil Stocks Listed on New York Stock Exchange

Compiled by Carl H. Pforzheimer Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

1934 High	1934 Low	Week ended Dec. 15 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	1933 High	1933 Low	1932 High	1932 Low	1931 High	1931 Low
55⅝	39	3,200	48½	46¼	47	Amerada Corp.	774,875	N.P.	50cQ	10-31-34	47⅝	18½	22¾	12	23	11¼
35¼	21½	8,100	25	23⅜	23¾	Atlantic Refining	2,673,834	$25	25cQ	12-15-34	32½	12⅜	21⅞	8⅝	23⅝	8⅝
10	5⅞	9,700	6¼	6	6⅛	Barnsdall Corp. A	2,248,795	$5	....	5-11-31	11	3	7	3⅜	14½	4
19¼	6⅞	21,900	8	7⅝	7⅞	Columbia Gas & Elec.	11,610,036	N.P.	....	5-15-34	28⅛	9	21	4¼	45⅝	11⅝
14¼	7¼	23,700	8⅛	7½	7⅝	Consolidated Oil Corp.	14,218,835	N.P.	14c	10-31-34	15¾	5	9	4	15⅞	4½
22⅝	15⅜	10,900	18⅝	17¼	17⅝	Continental Oil of Delaware	4,738,593	$5	25c	10-31-34	19⅝	4⅞	9⅜	3⅝	12	5
23¼	12	2,500	16¾	15½	15½	General Asphalt	387,149	$10	....	6-15-32	27	4⅝	15½	4¾	47	9⅝
5⅝	2½	500	3	2⅝	2⅝	Houston Oil (new)	1,098,618	$25	....	10-17-30	7⅜	1⅞	5⅝	1⅛	14⅛	3
3⅜	1	1,100	1	1	1	Louisiana Oil Refining	1,302,158	N.P.	....	.....	4	⅝	2¼	½	4½	1
14¾	9⅛	5,300	12⅛	11½	11⅞	Mid-Continent Petroleum	1,857,912	$10	25c	11-15-34	16	3¾	8⅞	3¾	16¾	5
21⅛	10	300	13⅛	13⅛	13⅛	National Supply of Delaware	382,591	$25	....	5-15-31	28⅝	4	13	3½	10¼	5
15⅞	8½	15,400	10	9⅜	9⅜	Ohio Oil Co.	6,563,107	N.P.	15c	12-15-34	17⅝	4⅝	11	5	19½	5⅛
9⅜	5½	2,100	8¾	7⅞	8	Pacific Western Oil	1,000,000	N.P.	25c	10-25-33	9½	3	8	3	15	2⅜
2½	⅝	100	⅝	⅝	⅝	Panhandle P. & R.	198,770	N.P.	....	.....	4¼	⅜	1¼	¼	4¼	⅝
20¾	13⅜	9,700	15¼	14⅜	14½	Phillips Petroleum	4,154,687	N.P.	25c	12-1-34	18¾	4¾	8½	2	16⅝	4
16⅜	8	4,900	8⅝	8	8⅛	Plymouth Oil Co.	990,261	$5	4% Stk.	12-22-34	17⅝	6¾	12½	6	18	6
14⅞	6⅛	14,500	6⅞	6⅛	6¼	Pure Oil	3,038,370	N.P.	....	9-1-30	15⅜	2½	6½	2⅞	11⅞	3⅛
39⅛	28⅝	2,400	30¼	28⅝	30	Royal Dutch N. Y. shares	432,224	$14	$1.35	7-31-34	39¾	17⅝	23¾	12⅛	42⅝	13
38⅜	20¾	1,600	26½	24⅞	24⅞	Seaboard Oil of Delaware	1,204,460	N.P.	15cQ§	12-15-34	43⅝	15	20⅜	6⅝	20¾	5½
11½	6	7,900	7⅛	6½	6⅝	Shell Union Oil	13,070,625	N.P.	....	6-30-30	11⅝	4	8¾	2½	10¼	2½
89	57	900	70¼	68	68¾	Shell Union Oil pfd.	400,000	$100	....	7-1-31	61	28½	65¼	18	78	15
16⅞	7¼	9,600	16⅜	15⅛	15¼	Simms Petroleum	461,000	$10	30c	8-1-34	12⅝	4⅞	7½	3¼	11	3½
11½	6	800	7¾	7¼	7¼	Skelly Oil	1,008,514	$25	....	12-15-30	9⅞	3	5⅜	2½	12⅞	2
19⅞	12½	31,700	14⅞	14⅛	14⅛	Socony-Vacuum	31,019,694	$25	15cQ	12-15-34	17	6	12¼	5¼	21	8⅜
42⅞	26½	10,500	32	30⅜	30⅜	Standard Oil of California	13,102,900	N.P.	25c	12-15-34	45	19½	31⅞	15⅛	51¾	23⅛
32¾	23¼	17,900	25⅜	25	25⅛	Standard Oil (Indiana)	15,941,894	$25	25cQ	12-15-34	34	17	25⅛	13⅛	38½	13½
41	26	800	30¼	27½	30	Standard Oil of Kansas	200,000	$10	50cQ	10-31-34	39⅞	12¾	16½	7	19	7⅝
50⅛	39¼	16,500	42¼	40½	40⅝	Standard Oil of New Jersey	25,740,065	$25	50cSA§	12-15-34	47½	22¾	37⅜	19⅞	52½	26
74¼	51½	500	67	66¼	67	Sun Oil	1,733,013	N.P.	25cQ†	12-15-34	59	35	39⅞	24⅜	45¼	26¾
29⅜	19¾	28,000	21¼	19¾	19¾	Texas Corp.	9,486,417	$25	25cQ	1-1-35	30⅛	10¾	18¼	9¼	36¼	9¾
6½	2½	2,400	3⅛	3	3	Texas Pacific Coal & Oil	880,703	$10	....	12-31-29	6½	1⅝	4	1½	6½	1⅞
14⅝	8	8,700	9	8⅝	8⅝	Tide Water Associated	5,618,672	N.P.	....	2-16-31	11¾	3⅛	5⅝	2	9	2¼
86	64½	1,200	84	82½	82⅝	Tide Water Associated pfd.	666,524	$100	$2.	12-22-34	65¼	23½	60	20	68	20¼
20½	11½	4,000	16	15¼	15¼	Union Oil of California	4,386,070	$25	25cQ	11-10-34	23⅜	8½	15⅜	8	26⅝	11
24	15⅝	6,700	24	22⅝	23⅝	Union Tank Car	1,200,000	N.P.	30cQ	12-1-34	22¾	10½	19¼	11¾	25⅛	16
5¾	2	1,900	2⅜	2	2	Wilcox Oil & Gas	424,839	$5	....	5-10-28	5½	2	8¾	2¾	9⅜	2¾

*Ex-dividend. †Plus extras in common stock. §Plus extras.

Active Oil Stocks Listed on New York Curb

Compiled by Carl H. Pforzheimer Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

1934 High	1934 Low	Week ended Dec. 15 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	1933 High	1933 Low	1932 High	1932 Low	1931 High	1931 Low
38	26	300	32	30¼	30¼	Buckeye Pipe Line Co.	200,000	$50	75cQ	12-15-34	39¾	25	35	17½	56	30
5½	1⅝	5,100	2⅛	1⅝	1¾	Carib Syndicate	579,000	25c	....	.....	7¾	¼	¾	¼	2⅜	¼
150	115	250	150	140	140	Chesebrough Mfg. Co.	120,000	$25	$1Q†	12-28-34	129	71	90	53	129½	75
4¼	1½	41,200	1⅝	1½	1½	Cities Service	37,804,394	N.P.	....	6-1-32	6¼	1½	6⅞	1¼	20¾	5
3¼	½	1,500	⅞	⅝	⅞	Colon Oil	2,200,000	N.P.	....	.....	4	¼	1¼	¼	3⅛	¼
3⅞	½	4,600	⅞	½	⅞	Cosden Oil	399,687	$1	....	.....	3⅞	1⅜	2⅞	¼	3¾	⅜
14⅜	9⅝	4,800	12⅜	12	12	Creole Petroleum	6,974,356	$5	....	.....	12	4¾	3½	1⅜	3⅞	1⅝
7½	4¼	200	4¾	4⅝	4⅝	Darby Petroleum	509,696	$5	25c	7-25-34	8	2½	7⅛	1⅝	2½	1⅜
2¼	1	No sales ..	..	..	..	Derby Oil & Refining	263,162	N.P.	....	.....	2⅜	⅞	3	1	6	1½
37	30	100	33½	33½	33½	Eureka Pipe Line	50,000	$100	$1Q	11-1-34	41⅝	20	35	18	36	19
76¾	49¾	2,400	55¾	54	54½	Gulf Oil Corp.	4,538,101	$25	....	10-1-31	62	24	44¾	23	75½	25⅜
46⅜	33¼	9,800	45⅜	43½	44¾	Humble Oil & Refining (new)	8,923,935	N.P.	25cQ	1-2-35	105½	40	55	35⅝	72	44½
17⅞	12⅝	4,400	16⅞	16¼	16¾	Imperial Oil of Canada	26,857,152	N.P.	25cSA†‡	12-1-34	15⅞	6½	10⅞	6¼	18¼	7⅜
6⅞	3¾	400	4	4	4	Indiana Pipe Line	300,000	$10	15cSA†	11-15-34	8	3⅛	7½	2¾	21⅛	5½
33⅜	19⅜	12,500	30⅞	29¾	30	International Petroleum	14,247,088	N.P.	56cSA†‡	12-1-34	23½	8⅞	12¼	8	15½	7⅜
5	2⅛	9,900	4⅞	4⅝	4¾	Louisiana Land & Exp.	3,000,000	N.P.	....	.....	2¼	⅛	2½	½	2	½
6	3½	No sales ..	..	..	..	Lion Oil Refining	270,000	N.P.	....	10-27-30	9½	1¼	3½	⅞	6¾	1½
8⅜	4¼	2,500	5	4½	4⅝	Lone Star Gas	5,382,723	N.P.	16cQ§	3-31-34	11⅞	4¾	11	3⅜	29	5½
5½	4	1,800	4⅝	4¼	4¼	Mountain Producers	1,682,182	$10	15cQ	1-2-35	6½	2½	4⅝	2⅛	5⅞	2
18½	13⅛	2,100	13¾	13⅛	13¾	National Fuel Gas	3,810,183	N.P.	25cQ	10-15-34	20	10	14⅝	8	26½	9⅜
9½	7	200	7¼	7⅛	7⅛	National Transit	509,000	$12.50	35cSA	12-15-34	10	5½	10½	6	17½	5
2½	1¾	No sales ..	..	..	..	New Bradford Oil	1,445,202	$5	10c	9-15-34	2⅛	½	⅞	¼	1½	½
2¾	1	No sales ..	..	..	..	New Mexico and Arizona	1,000,000	$1	....	.....	1⅞	½	1¼	⅜	3	¾
4⅝	3	No sales ..	..	..	..	New York Transit	100,000	$5	15cSA	10-15-34	4⅞	3	9⅜	7½	14½	5⅞
7	4⅝	200	5⅜	5¼	5¼	Northern Pipe Line	120,000	$10	25cSA	1-2-35	6½	4¼	5½	3½	35½	20
2⅝	⅞	24,600	2¼	1⅞	2	Pantepec Oil	1,608,700	N.P.	....	.....	3⅜	⅛	⅝	1/16	2	⅝
3⅜	⅞	100	1	1	1	Ryan Consolidated	296,931	N.P.	....	.....	4¼	⅝	2⅛	⅝	3	¾
7⅞	5½	1,300	6	6	6	Salt Creek Producers	1,496,859	$10	20cQ	11-1-34	9¼	3½	5½	2⅞	7⅝	2⅜
26½	17½	2,700	23¼	22⅝	22¾	South Penn Oil	1,200,000	$25	30cQ	12-31-34	22⅛	11	16½	9⅝	23⅞	9¼
5¼	3½	No sales ..	..	..	..	Southern Pipe Line	100,000	$10	15cSA	9-1-34	6	2⅛	10	3¾	17	7
47	41	No sales ..	..	..	..	Southwest Penna. Pipe Lines	35,000	$50	$1Q	12-31-34	43	24½	37	27	42½	25
17⅝	14⅝	4,600	17⅜	17⅜	17½	Standard Oil of Kentucky	2,603,983	$10	25cQ†	12-15-34	19¼	8⅝	15⅞	8⅞	23⅝	12⅛
16⅞	8½	400	9	8¾	8¾	Standard Oil of Nebraska	190,822	$25	....	6-20-34	20½	11	19	10¼	36½	16
28½	12¼	1,400	14	13½	13⅞	Standard Oil of Ohio	1,610,810	$25	....	1-3-33	41	15½	30½	15½	62½	23
2	1/16	2,300	1⅛	1	1⅛	Sunray Oil	1,162,840	$1	....	4-15-31	1½	¼	⅝	⅛	5¼	¼
11	4⅝	900	6⅝	6	6	Texon Oil & Land	936,028	N.P.	15cQ†	12-29-34	13¾	6¼	10½	4½	12⅞	2⅛

*Ex-dividend. †Plus extras. ‡Payable in Canadian funds. §Payable in preferred stock.

Note—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.

Eastern Fields

(Continued from Page 63)

93 feet with about 520,000 feet of gas showing at 2,891 feet. The Gordon sand was at 2,938-46 feet with gas showing at 2,940 feet and showing about 100,000 feet a day.

Drilling in West Virginia

In Elk district, Kanawha County, the most interesting district in West Virginia at the present time due to the wells drilling for the Oriskany sand production found on the Burdette farm, the following wells are drilling: S. B. Avis, trustee, has reached 3,285 feet on the W. T. Copen farm; V. C. Smith and others have reached 1,195 feet on the Matheney, Wertz and others island at the mouth of Coopers Creek; the Clyde Oil & Gas Co. is drilling at 885 feet on the F. W. Shinn farm; the Elk River Oil & Gas Co. has rigged up on the W. T. and J. H. Goshorn farm; the Echo Oil & Gas Co. has part of the material for a test on the B. F. Botkin farm; and Benedum and Trees have completed the rig for a test on the M. C. Wingfield farm.

In Boone County, there are no new locations or wells starting. The Pure Oil Co. has reached 2,357 feet in the No. 70 on the Federal Coal Co. lease in Sherman district and 1,803 feet in the No. 71.

Calhoun County

In Calhoun County, Creed Barker and others have started drilling a test on the A. R. Stump farm in Sherman district. In this district, the following wells are drilling: L. P. Bickel at 1,450 feet on the Martha Stump heirs farm, No. 15; Godfrey L. Cabot, Inc. at 550 feet on the Henry Knight farm, a test; F. F. McIntosh at 800 feet on the Seymore Settle farm, No. 2. In Center district, the Howard Brothers have reached 1,650 feet on the L. F. Norman farm, a test and Park Bowser is moving material to the location for No. 10 on the Dora Ramsburg farm. In the Washington district, Howard Jarvis and others are spudding in the test on the J. S. Rogers farm. Carroll and Hamilton are rigging up the test on the E. C. Knotts heirs farm. In Lee district, the Mudlick Oil & Gas Co. are drilling a second test on the G. W. Bennington farm. M. F. Crawley and others have a rig standing for a test on the Lester and Riggs and others lease.

In Clay County, F. F. McIntosh is rigging up a test on the Peabody Coal Co. lease in Pleasant district. In Otter district, the outside test of Benedum and Trees on the Andrew Tanner farm is drilling at 2,710 feet. In Cabell County, on Fidges Creek in Grant district, the Shale Gas Co. has completed a rig and started drilling a test on the B. C. Beckett farm. It is 1½ miles south of the test on the L. B. Weatherholt farm.

In Marshall County, McIntire and others have made a location for a test on the J. W. Henry heirs lease in Franklin district. In Marion County, Monroe and Laughlin have reached 1,735 feet in No. 3 on the A. D. Wells farm in Mannington district. The Pittsburgh Coal was at 1,735 feet.

In Pleasants County, Dinsmoor & Co. have made a location for No. 11 on the Isaac Pethtel farm in Washington district. In McKim district, Ward and others are down 500 feet in the No. 20 on the George Varner lease.

In Ritchie County, W. R. Hays and others have made a location for a test on the M. J. Livingston farm in Murphy district. In this district, Samuel Summers and others have made a location for a test on the Ada Jones heirs. In the Pike Pool, the McCall Drilling Co. is down 1,700 feet on the Elizabeth Pyles farm, a test. J. C. Smith and others have reached 1,925 feet on the Lewis Hanlon farm, No. 3. Smith and Hendershot are down 1,822 feet in the No. 3 on the Charles Wilcox, Sr. lease.

In Tyler County, the Gilco Oil & Gas Co. is drilling No. 3 on the William Way farm in McElroy district and has reached 700 feet. In Wood County, J. E. Yeager and others are drilling at 1,200 feet in the test on the W. B. Wamsley farm in Union district.

In Wetzel County, Jason Wade has reached 1,956 feet in the test on the Lewis Taylor farm in Proctor district. The Pittsburgh Coal was at 840 feet and it is now through the Maxton sand. G. N. Yoho and others are shut down at 2,507 feet in the test on the George A. Smith farm and are through the Gordon sand. C. B. Lewis and others have a rig standing for a test on the Nicholas Blatt farm.

Rocky Mountain Area

(Continued from Page 74)

ing well, making 450 bbls. initial after running tubing and packer. No. 2, C SW NE Section 24, was dry and abandoned early this year. Consolidated Gas Co.'s No. 2 Tribal, NE SE NE Section 34-35-6w, swabbed 75 bbls. the first 24 hours and 30 bbls. the second period from pay at 2,946-56 feet.

The two new locations are Wickstrand & Walgren's No. 1 Simero, Lot 5, Block 17, Original Townsite Survey, Section 12-33-6w, which is moving in materials, and the Hannah-Porter Co.'s No. 1 State, CEL, Lot 1, Block 3, Second Addition, Section 12-33-6w, moving in materials. Both are on town lots in Cut Bank.

C. P. Castle's No. 1 State, SW cor. Section 36-35-6w, close to the line between the oil and gas areas, had 3,000,000 to 4,000,000 feet of gas in the Sunburst at 2,715-25 feet and is drilling at 2,741 feet. The 7-inch is frozen at 2,723 feet. A. B. Cobb's No. 4 Walberger, SE cor. Section 35-35-6w, an offset to the Castle well, is drilling at 1,820 feet. Cobb's No. 3 Walberger, NE SW SE Section 35, which has the record for the best well in the field, is still flowing 130 bbls. daily. It was completed September 10 for 722 bbls. the first 48 hours. Consolidated Gas Co.'s No. 1 Tribal, E NE NE Section 34-35-6w, is bottomed at 2,906 feet and fishing for bailer.

Indian Oil Co.'s No. 1 Reikhoff, SW SE Section 3-34-6w, is fishing at 2,865 feet. Lawler & Hoer's No. 1 Clarkson, C SW SW Section 9-33-5w, is drilling at 1,930 feet, and the Montana Headlight Oil Co.'s No. 4 Yunck, NW NW Section 1-34-6w, is drilling at 2,420 feet. Montana Power Gas Co.'s No. 1 State, C SW Section 16-33-5w, is drilling at 1,960 feet. Nadeau Brothers' No. 1 Farmers State Bank, C NW NE Section 17-33-5w, is running the 8¼-inch to bottom at 2,785 feet to shut off water in the Moulton sand at 2,780-85 feet. R. C. Tarrant's No. 5 Haglund, Jr., C SW NE Section 13-34-5w, landed the 8¼-inch at 2,690 feet and is drilling by tools. Watson and others' No. 1 Miller, W NW NE Section 1-33-6w, is drilling at 285 feet.

Big Horn County

Enterprise Oil Co. and others' No. 2 Lynde, SW cor. SE Section 21-6s-35, Lodge Grass Creek, is shut down following collapse of 4¾-inch 200 feet off bottom at 3,621 feet.

Carbon County

Ohio Oil Co.'s No. 14 Maddox, C NW NW Section 10-7s-21, close to the northwestern edge of Dry Creek, is a completion and flowed 352 bbls. the first 24 hours and 287 bbls. the second period from the Dakota at 5,958 feet. It had water in the Lakota and plugged back from 6,112 feet.

Fergus County

Button Butte Oil & Gas Co.'s No. 1 Woodward, SE cor. SW Section 20-14-24, Button Butte, formerly carried as H. Clark Rowland and others, is drilling at 2,950 feet.

Petroleum County

Guy Smith and others' No. 3, NE SE SW Section 33-14-26, Flatwillow, is drilling at 1,338 feet. First Cat Creek at 1,015-19 feet was dry and the second sand at 1,250 feet had a show of oil.

Toole County

Drilling in the Kevin-Sunburst Field came to a standstill when L. P. Jackson's No. 1 Halter, E NW NE Section 21-35-2w, shut down for the winter at 1,100 feet with junk in the hole. T. P. Kyle's No. 1 Clark, SW cor. SE Section 19-37-1e, Bow and Arrow district, is shut down at 1,100 (correct) feet.

UTAH

Jerome L. Andrus, trustee's No. 1, C SE NW Section 6-41-11w, Virgin district, topped the Virgin limestone at 635 feet and is drilling at 899 feet. Uintah Gas Co.'s No. 5, NW cor. SW Section 23-5s-22, Ashley Valley, Uintah County, is drilling at 1,678 feet.

OREGON

Steiwer Dome Development Co.'s No. 1, SW NW Section 14-9s-3w, Marion County, is sidetracking collapsed pipe at 1,200 feet, total depth.

WASHINGTON

Peoples Gas & Oil Co.'s No. 1 Donnie Boy, Section 19-17-28, Frenchman Hills district, Grant County, began spudding December 2 in an 18-inch hole to test a block of 135,000 acres. Northwest Oil Research Corp.'s No. 1-A Norco, NW Section 26-2-20, Wenatchee Heights, Chelan County, ran the 8¼-inch to top of tools at 1,775 feet and is fishing.

Oklahoma Fields

(Continued from Page 66)

E. H. Moore and others' No. 1 Smith, NW cor. Section 31-2-7, McLish lime at 4,258-62 feet, 404 bbls. of oil in one hour from that formation, the first well to have produced from the McLish.

New work in the field included Blackstock and others' No. 4 Craddock, SE NE SE Section 25-2-6, a rig. Magnolia Petroleum Co.'s No. 5 Tom Norris, NW NW SE Section 25-2-6, location. Moore and others' No. 1 G. Smith-B, SE cor. Section 25-2-6, location. Crosbie & Moran's No. 4 D. Hardin, SE SW NE Section 30-2-7. Magnolia Petroleum Co.'s No. 4 Hardin, SW NE NW Section 30-2-7, rigging up rotary.

J. D. Sledge and Jack Lynch's No. 1-A Thompson, SW NE SW Section 1-1-7, was acidized with 1,500 gallons in Hunton lime at 3,830-4,108 feet, and flowed 109 bbls. in 19 hours.

In Southern Fields

Farlyn Oil Co. completed No. 26 Seay, 1,258 feet south and 1,500 feet east of C Section 3-7s-5w, Jefferson County, is a 40-bbl. completion in sand at 1,188-1,212 feet and 1,220-54 feet. Long and others' No. 13 Seay, SW SE SE SE Section 3-7s-5w, is a 50-bbl. completion from broken sand at 1,210-35 feet and 1,246-59 feet. Bridwell Oil Co.'s No. 4 Wahlegemuth, SW NE NW Section 30-6s-5w, is a 60-bbl. completion at 1,501-07 feet.

In Marshall County, R. A. Godfrey's No. 7 Burge, 1,155 feet north and 1,155 feet west of SE cor. Section 25-7-5, is a 4-bbl. completion.

In Stephens County, George Pace and others' No. 15 Watkins, SE NE SW SE Section 21-2s-7w, was dry and abandoned at 1,717 feet, and Eggleston and others' No. 1 W. Wilson, NW SW NW Section 2-2s-5w, was abandoned at 485 feet where it had a hole full of water. L. Sykes' No. 1-A Gerdes, NE NE SW Section 21-1s-8w, was abandoned as dry at 2,490 feet. Mudge Oil Co. completed No. 36 Woods, SE NW SW NW Section 26-1s-5w, a 5-bbl. well at 666-80 feet.

In Carter County, Skelly Oil Co.'s No. 3 Moore, SE SE NW Section 17-2s-2w, was completed. It flowed 150 bbls. in 24 hours, very much pinched in. Paul Turner and others' No. 1-A Brown, NW SW SW Section 19-1s-2w, was completed as a gas well, good for 5,000,000 feet, with a spray of oil from sand at 1,127-68 feet. Fred Shores abandoned his No. 1 Ratliff, SE SE NE Section 29-1s-2w, at 610 feet. It was dry in two sands.

New work in the southern counties included C. B. Welch's No. 1 M. Collins, 510 feet from the north and 510 feet from the east lines of NE Section 19-8s-8e, in Bryan County, a machine. Long and others' No. 14 Seay, 35 feet north and 584 feet west of SE cor. Section 3-7s-5w, Jefferson County, a rig. Bridwell Oil Co.'s No. 1 W. and D. Seay, NW cor. Section 22-6s-6w, Jefferson County, rigged up. Murphy Oil Co.'s No. 7 Fobb, SE NW SW Section 12-2s-8w, Stephens County, deepening from 1,520 feet, drilling at 1,775 feet. L. Sykes' No. 6 Franklin, 450 feet north and 450 feet west of SE cor. Section 18-1s-8w, Stephens County, rigged up.

New York-Pennsylvania Gas Field Developments

(Continued from Page 77)

J. Rupert farm, Hebron Township. George C. Page has cellar dug and shut down on the J. B. Reed farm, Allegany Township. Hanley & Bird are digging cellar on the Effie Slingerland farm, same township. Updegraf and others are digging cellar on the James O'Donnell farm, Genesee Township. Sylvania Corp. is drilling at 4,000 feet on the John Higley farm, Hebron Township.

Tioga Natural Gas Co. has resumed drilling on its No. 1 Bank Lot, Shippen Township, Cameron County, and is down 4,925 feet. Top of the Onondaga lime was found at 4,890 feet. Same company's C. B. Howard test, same township, is still shut down. Electro Geometer has a location on the Armstrong Forest Co. property, Norwich Township, McKean County. East Penn Development Co. is drilling at 4,445 feet on the Presbyterian Church property, Farmington Township, Tioga County. Cabot has a location on the John Stiles farm, Clymer Township, Tioga County, and is drilling at 5,100 feet on the W. F. Burroughs farm, Gaines Township.

NEW YORK STATE

In New York State, Speyer and others were shut down at 800 feet on the Paul Boa farm, Seneca Falls Township, Seneca County. Angelo Cisco and others were shut down at 2,000 feet on the N. B. Phelps farm, Addison Township, Steuben County. Alliance and others were shut down at 3,600 feet on the Evans property, Tyre Township, Cattaraugus County. Wright-Reed and others were shut down at 1,015 feet on the James Neilson farm, Thurston Township, Steuben County.

Empire Gas & Fuel Corp. is drilling at 4,250 feet on the Dean estate property, Alma Township, Allegany County. Kauffman and others were drilling at 2,340 feet on the Steadman farm, Allen Township, Allegany County. Top of the Tully lime was 2,325 feet. Belmont Quadrangle Development Co. is drilling at 3,110 feet on the Wing farm, Greenwood Township, Steuben County. Murray Estate, on the Benedum & Trees property, Belfast Township, Allegany County, is drilling at 2,460 feet.

Harry Irwin is drilling at 250 feet on the Edward Fiske farm, Thurston Township, Steuben County. A. B. Button is shut down at 810 feet on the Earl Dadson farm, Junius Township, Seneca County. Cunningham Natural Gas Co. is rigging up on the Maxwell farm, Willing Township, Allegany County. Great Northern Natural Gas Co. has rigged up and shut down on the Myron Van Orman farm, Briston Township, Ontario County. Trumbull Co. is shut down at 900 feet on the W. B. Lasher farm, Throop Township, Cayuga County.

PROFESSOR CARNEY DIES

Prof. Frank Carney, 66, nationally known geologist and member of the Baylor University faculty, died at his home in Waco, Tex., on December 13. He was chief geologist for the National Refining Co. in 1917 and in charge of the company's land department in 1923-29.

DEATH OF CLYDE JACKSON

Clyde Jackson, formerly geologist for the Tide Water Oil Co. in West Texas, but of recent date with the Sinclair Refining Co., died at Midland, Tex., on December 14.

Gulf Coast Wildcats

(Continued from Page 39)

Texas Co.'s No. 12 Houston Oil Field Assn., 2,475 ft. S and 330 ft. E of NW cor. of Lot 6, A.C.H.&G. Sur.
T.D. 4,115 ft.; P.B. and sidetracked at 3,982 ft.

Texas Co.'s No. 15 Houston Oil Field Assn., 441.9 ft. W and 247.5 ft. S of NW cor. of Lot 7, A.C.H.&B. Sur.
Derrick.

Texas Co.'s No. 1 Wray, 330 ft. N, 43 deg. E of W cor. of lease, Thos. Spraggins Sur.
Drlg. sand 2,770 ft.

Texas Co.'s No. 13-B Belcher, W of No. 10-B Belcher, H. N. Little Sur.
T.D. 5,160 ft.; I.P. 138 bbls. first 10 hrs.; 32/64-in. choke.

Texas Co.'s No. 1 Thomas James, 247.5 ft. N and 330 ft. E of SW cor. of Lot 1, A. C.H.&B. Sur. 91, Abst. 402.
Abd. 7,635 ft.

Gulf Prod. Co.'s No. 4 Colby, 330 ft. out of most northerly NE cor. of 200-ac. tract, Thomas Sproggins Sur.
T.D. 4,152 ft.; I.P. 400 bbls.

Texas Co.'s No. 1-A Massey, 330 ft. out of NW cor. of 33-ac. tract in H. Stevens Sur.
Abd. 7,491 ft.

WEST COLUMBIA—BRAZORIA COUNTY

Texas Co.'s No. 84 Hogg, 2,463 ft. N, 50 ft. W from SE cor. of lease in M. Varner Sur.
Temporarily S.D. 5,342 ft.

BARBERS HILL—CHAMBERS COUNTY

Moody Corp.'s No. 1-C E. W. Barber, 302 ft. from N line and 312 ft. from E line of "B" lease, H. Griffith Sur.
Reaming to straighten hole, 2,751 ft.

Humble O. & R. Co.'s No. 8-B Kirby, 200 ft. N of No. 2, 100 ft. W of E line, Henry Griffith league.
Location.

Humble O. & R. Co.'s No. 7-B Kirby, 300 ft. W of No. 6 in Henry Griffith league.
Drlg. hard sand, shale and lime; gas and oil odor at 4,722 ft.

Humble O. & R. Co.'s No. 8-B Kirby, 200 ft. N of No. 2, 100 ft. W of E line.
Derrick.

Sun Oil Co.'s No. 6 Higgins, 302 ft. W of E line and 432 ft. N of S line of lease.
T.D. 4,338 ft.; set 7-in. csg. at 4,263 ft.; W.O.C.

Sun Oil Co.'s No. 10 Chambers, 50 ft. from N and W lines of lease.
Drill pipe stuck 3,658 ft.

Sun Oil Co.'s No. 17 Wilburn fee, 188 ft. E of W line and 40 ft. S of N line and 130 ft. W of No. 16.
Derrick.

Sun Oil Co.'s No. 22 J. Wilburn, midway between wells No. 17 and 21, or 150 ft. from each well.
Drlg. sand 3,305 ft.

Texas Gulf Prod. Co.'s No. 3 T. S. Fitzgerald, 340 ft. S of N line and 60 ft. E of W line of lease.
Drlg. rock 734 ft.

Texas Gulf Prod. Co.'s No. 2 Morgan Fitzgerald, 400 ft. N of S line, C of Strip No. 3.
Drlg. salt 1,541 ft.

Texas Co.'s No. 10 Wilburn, 475.8 ft. N, 39 deg., 10 ft. W from SW cor. of lease.
W.O.C. 176 ft.

Texas Gulf Prod. Co.'s No. 3 O. W. Winfree, 505 ft. S of N line and 50 ft. W.
Rewashing screen 5,590 ft.

Yount Lee Oil Co.'s No. 37 Chambers Co., 400 ft. W of No. 24 and in line with Nos. 24 and 21.
Drlg. caprock 1,483 ft.

Yount Lee Oil Co.'s No. 38 Chambers County, 50 ft. N S line, direct offset to Sun's No. 10 Chambers County, Wm. Bloodgood Sur.
Derrick.

BOLING—FORT BEND COUNTY

Allied Minerals, Inc.'s No. 1 J. H. Blackwell, 1,400 ft. from E line, 100 ft. from S line of 50-ac. of J. H. Blackwell 100 ac., John Huff Sur.
S.D. for rig repairs 4,495 ft.

Midland Oil Co.'s No. 1 P. F. Coulter, 150 ft. from S line, 4,174 ft. from W line of 100-ac. tract, Miller League No. 2.
7-in. csg.; T.D. 4,883 ft.

Allied Minerals, Inc.'s No. 1 E. C. Farmer, James Scott League, 750 ft. SE of NW line and 150 ft. SW of NE line of Gulf Prod. Co.'s E. C. Farmer 50-ac. tract.
Coring saturated oil sand 4,979 ft.

Irwin Larsen et al's No. 1 J. R. Farmer, 100 ft. NW and 100 ft. SW from E cor. of 125-acre lease, James Scott Sur.
Location.

ORCHARD—FORT BEND COUNTY

Gulf Prod. Co.'s No. 41 Moore, 2,372 ft. S along W line from NW cor. of James Frazier Sur., and 2,154 ft. at R/A.
Drlg. shale and lime 4,152 ft.

HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 42 Cade, E. Fitzsimmons Sur., half way between Nos. 39 and 28 and 150 ft. E at right angles.
Drlg. shale 5,865 ft.

Yount Lee's No. 41 Cade.
Drlg. sand and shale 5,564 ft.

Yount Lee Oil Co.'s No. 44 Cade.
Derrick.

Yount Lee Oil Co.'s No. 10 Smith.
Drlg. wtr. sand 5,311 ft.

Yount Lee Oil Co.'s No. 28 Smith.
Derrick.

Yount Lee Oil Co.'s No. 2 Stewart.
Drlg. sand 2,910 ft.

DICKINSON—GALVESTON COUNTY

Humble O. & R. Co.'s No. 1 A. F. Danielson, center of 10-ac. tract, being Lots 6 and 7 of Righter Subd., John Sellers Sur.
Building foundations.

ARRIOLA—HARDIN COUNTY

Houston Oil Co.'s No. 4-X Arriola fee, 400 ft. E of No. 3-X.
Drlg. 5,250 ft.

BATSON—HARDIN COUNTY

J. H. Burt et al's No. 1 Jordan, 300 ft. E and 100 ft. S of No. 1, Mary Hooks Sur.
Location.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 9 N. Jordit, 200 ft. due W of No. 9 R. Jordit.
Location.

Rio Bravo Oil Co.'s No. 9 R. Jordit, 200 ft. due south of No. 5 R. J.
T.D. 1,312 ft.; I.P. 65 bbls. per day.

Kines Bros.' No. 1 Coswell.
Swabbing; T.D. 3,323 ft.

SOUR LAKE—HARDIN COUNTY

Alpha et. Co.'s No. 2-A Wm. Weiss, 100 ft. W of No. 2.
Drlg. shale and shells 3,750 ft.

Sun Oil Co.'s No. 3 Bernard Corp., 150 ft. from N and W lines of Lot 11, E.T.&B. Sur., Sec. 69.
Reaming shale 7,400 ft.

Texas Co.'s No. 314 fee, 200 ft. E at R/A to mid-point between wells Nos. 311 and 312.
T.D. 1,624 ft.; comp.; 400,000 ft. of gas daily; 375 lbs. tubing pressure; 375 lbs. csg. pressure; ¼-in. choke.

Texas Co.'s No. 315 fee, 200 ft. E at R/A to point midway between Nos. 312 and 313.
Drlg. 452 ft.

GOOSE CREEK—HARRIS COUNTY

Kerring's No. 1 Williams, 150 ft. from SE cor. and 55 ft. NE of Hybush's No. 1, in W. Scott upper league.
Cellar.

Humble O. & R. Co.'s No. 80 Simms-Smith Scott Lower League, 1,000 ft. E of the most westerly W line, and 300 ft. N of the most northerly S line.
Reaming shale and lime 6,801 ft.

PIERCE JUNCTION—HARRIS COUNTY

Gulf Prod. Co.'s No. 1 Taylor.
Rig up to D.D.; mixing mud.

Gulf Prod. Co.'s No. 10 H. C. Cain, 399 ft S and 290 ft. E of NW cor. of lease and 217 ft. N of No. 9, J. Hamilton Sur No. 879 (workover).
Drlg. sand 4,153 ft.

Rio Bravo Oil Co.'s No. 27-A Settegast, 377 ft. S, 553 ft. W of NE cor. of Settegast "A" tract, James Hamilton Sur.
Drlg. sticky shale 4,842 ft.

Rio Bravo Oil Corp.'s No. 9-A Settegast, 1,575 ft. N line, 350 ft. E line NE cor "A" lease, J. A. Kopman Sur.
Drlg. shale 5,076 ft.

MYKAWA—HARRIS COUNTY

West Prod. Co.'s No. 1 Diamond, Blk. 12, F. J. Rothas Sur.
T.D. 4,444 ft.

Danciger O. & R. Co.'s No. 1 Williams, SW cor. of 29-ac. lease.
No report.

West Prod. Co.'s No. 1 Lobit, C of Lot 17, Erin Gardens Subd., F. J. Rothaas Sur.
T.D. 6,313 ft.; P.B. 4,845 ft.

TOMBALL—HARRIS COUNTY

Humble O. & R. Co.'s No. 1 Hilderith, 466 ft. at right angles S from N line, 466 ft. at right angles from W line of 86-acre tract, J. House Sur.
Coring shale and sand 5,400 ft.

Humble O. & R. Co.'s No. 3-A Kobs.
7-in. csg. 5,557 ft.; T.D. 5,565 ft.

Humble O. & R. Co.'s No. 3 Petrick, 816 ft. E of W line, 950 ft. S of N line of 165.06-acre tract, J. Hooper Sur.
10¾-in. csg. 924 ft.; drlg. shale 3,148 ft.

Humble O. & R. Co.'s No. 3 Kuehn.
Comp.; 26 bbls. per hr. through ¼-in. choke; T.D. 5,559 ft.

Humble O. & R. Co.'s No. 5 B. Quilter, 466 ft. E of W line, A. Seuchel Sur.
Set 7-in. csg. at 5,547 ft.; washing in at 5,554 ft.

Humble O. & R. Co.'s No. 2 Rudel, 2,498 ft. N of S line, 737 ft. W of E line and 737.6 ft. E of W line, James House Sur.
T.D. 5,597 ft.; set 7-in. csg. at 5,591 ft.; W.O.C.

Texas Co.'s No. 4 W. B. Scherer, 2,731 ft. W of SE cor. of lease, Joseph House Sur.
Drlg. shale and boulders 1,172 ft.

KITTRELL-HOUSTON AND WALKER COUNTIES

Humble Oil & Ref. Co.'s No. 3 Shaw, Charles McEllis Sur.
Drlg. shale and sand 1,878 ft.

Humble O. & R. Co.'s No. 2 Texas Long Leaf Lbr. Co., 330 ft. SW of NE line, 660 ft. SE of No. 3, Chas. McEllis Sur., Abst. 332.
Location.

Humble O. & R. Co.'s No. 3 Texas Long Leaf Lbr. Co., 130 ft. SE of NW line, 330 ft. SW of NE line, and 660 ft. NW of No. 2, Chas. McEllis Sur.
Location.

Humble O. & R. Co.'s No. 4 Shaw, 990 ft. NW from SE line, 990 ft. SW of NE line of C. McEllis Sur.
Drlg. shale 1,312 ft.; set 10¾-in. csg. at 314 ft.

Humble O. & R. Co.'s No. 5 Shaw, 990 ft. N and 330 ft. E of SW cor. of the Shaw 100-ac. tract in Charles McEllis Sur.
Location.

W. A. Keils' No. 1 L. W. Huffman, center of Huffman tract, C. McEllis Sur.
Location.

VANDERBILT—JACKSON COUNTY

Imperator Oil Co.'s No. 1 Dutton, S C of Lot No. 11, Blk. 25, 450 ft. S of B.R. and 1,350 ft. W line of townsite, Ray Musquis Sur.
Rigged up and S.D.

Turman Oil Co.'s No. 1 T. H. Miller, 150 ft each way out of E 50-ac. of Miller 100-ac. tract in Ray Musquis Sur.
Rigging up.

BIG HILL—JEFFERSON COUNTY

Yount Lee Oil Co.'s No. 1-A Pipkin, 2,646 ft. S and 2,050 ft. W of NE cor. of survey.
Drlg. shale 4,510 ft.

FANNETT—JEFFERSON COUNTY

Gulf Prod. Co.'s No. 15 Thomas, 200 ft. W of Gulf's No. 7 Burrell.
Drlg. rock 6,790 ft.

CLEVELAND—LIBERTY COUNTY

Blackgold Pet. Co.'s No. 1 R. D. McDonald, 30 ft. due W of Gulf Prod. Co.'s 6-C Kirby, T. Devers Sur.
Location.

William J. Colegrove et al's No. 1 State School Land & Dev. Co., 466 ft. from W line and 170 ft. from S line of survey, Clayton Hooper Sur.
Location.

Gulf Prod. Co.'s No. 7 Kirby, 1,100 ft. N of No. 6-C Kirby.
T.D. 5,986 ft.; P.B. to 5,650 ft.

ESPERSON—LIBERTY COUNTY

General Crude Oil Co.'s No. 15 Moores Bluff, midway between No. 10 and No. 12 Moores Bluff.
Rigging up.

General Crude Oil Co.'s No. 9 Davis, 1,320 ft. each way from S and E lines of lease in D. Kokernut Sur.
Reaming 5,515 ft.

General Crude Oil Co.'s No. 1 W. D. Kay, Malcom Duncan Sur., 1,537 ft. along N line from NE cor., 560 ft. S at R/A.
Drlg. hard lime 4,942 ft.

HANKAMER—LIBERTY COUNTY

Gulf Prod. Co.'s No. 1 Boyette, offset to No. 1 Etzel.
Location.

Gulf Prod. Co.'s No. 3 Crow & Jacobs, 300 ft. each way out of SW cor. of survey, H.&T.C. Sur., A 253.
Drlg. shale 5,080 ft.

HULL—LIBERTY COUNTY

Gulf Prod. Co.'s No. 13 W. L. Thomas, 1,650 ft. N and 150 ft. E of SE cor. of 300-ac. tract, Jessie Devore Sur.
Drlg. shale 5,426 ft.

G. R. Brown and S. F. Bashara's No. 1 David Hannah, Jesse Devore league, 100 ft. S line, 150 ft. E line, 42-ac. Gulf tract.
Derrick.

Texas Co.'s No. 3 Barrow.
Rig up.

BUCKEYE—MATAGORDA COUNTY

United North & South Dev. Co.'s No. 1 Unit 4, Buckeye farm, J. C. Keller league, 214 ft. N line and 202 ft. E line of lease.
No report.

CONROE—MONTGOMERY COUNTY

Alpha Pet. Co.'s No. 3 Falvez, 466 ft. from N line and offsets to Sun Oil Co.'s No. 20 Keystone Mills.
T.D. 5,078 ft.; comp.; no gauge.

Humble O. & R. Co.'s No. 72 South Texas Development Co., 969 ft. W of E line, 700 ft. S of N line, T. C. Howell Sur.
Drlg. 2,969 ft.; set 10¾-in. csg. at 981 ft.

Houston Oil Co.'s No. 11 Cartwright, N offset to No. 10 Cartwright.
Location.

SPLENDORA—MONTGOMERY COUNTY

Bryce McCandless et al's No. 1 Texas Long Leaf Lbr. Co., 320 ft. from N and E lines of the W½ of Blk. No. 8, Walker County School Land Sur.
Drlg. 1,310 ft.

ORANGE—ORANGE COUNTY

Trio Oil Co.'s No. 1 D. S. Comier, 69 ft. W of E line and 39 ft. S of N line of 6.83-ac. tract in W. M. Dyson Sur.
Drlg. 2,010 ft.

PORT NECHES—ORANGE COUNTY

Port Neches Pet. Corp. et al's No. 1 W. B Organ, 450 ft. from NE line and 150 ft from NW line of A. Schramm Sur., 8 of Port Neches Field.
Moving in rig.

Texas Co.'s No. 3-B Polk, 200 ft. S, 450 ft W of SE cor. of Mary E. Hall Sur. No. 3
Drlg. clay 121 ft.

Texas Co.'s No. 10 Kuhn, 200 ft. N, 450 ft W of SE cor. of Mary E. Hall Sur. No. 3
Running 10¾-in. csg. at 2,154 ft.

Texas Co.'s No. 6 Kuhn, 150 ft. E, 150 ft. N of SE cor. of Mary Hall Sur.
Sidetracked at 5,297 ft.; W.O.C.

LIVINGSTON—POLK COUNTY

Gem Oil Co.'s No. 6 Davis & Holmes, 652 ft. from W and 662 ft. from N line of survey, A. Viesca Sur.
Location.

T. D. Humphries' No. 1 J. C. Whitforth, Block H.
Derrick.

Sun Oil Co.'s No. 2 H. J. Pratt, 330 ft. from N and E lines of Pratt 195-acre lease, A. Viesca Sur.
Rig up.

B. M. York et al's No. 1 Kingsbury County Holding Corp., 463 ft. from E and W lines, and 330 ft. from S line of Tract No. 19, A. Viesca Sur.
Abd. 4,358 ft.

B. M. York's No. 2 Kingsbury County Holding Corp., Tract 19, A. Viesca Sur., 150 ft. N of No. 1.
Clearing location.

GRETA—REFUGIO COUNTY

Atlantic and Stanolind's No. 7-G O'Brien.
Derrick.

Hewitt & Daugherty's No. 12 Lambert.
Rig up.

Humble O. & R. Co.'s No. 10 Fannie Heard.
T.D. 4,390 ft.; I.P. 42 bbls. per day; 7/64-in. choke; 1,100 lbs. tubing pressure; 1,450 lbs. csg. pre sure.

Humble O. & R. Co.'s No. 11 Fannie Heard, Running 7-in. csg. 4,385 ft.

Humble O. & R. Co.'s No. 16 J. F. B. Heard.
Set 7-in. csg. at 4,376 ft.; washing in at 4,390 ft.

United Prod. Co.'s No. 10 Fannie Heard, SE cor. of lease; workover.
Set screen 3,478 ft.

United Prod. Co.'s No. 15 M. F. Lambert, C of S½ of Blk. 15 of M. F. Lambert Subd.
T.D. 3,517 ft.; comp.; no gauge; 400 lbs. csg. pressure; 100 lbs. tubing pressure; ¼-in. choke.

REFUGIO—REFUGIO COUNTY

Houston Oil Co.'s No. 18 P. H. Rooke, 486 ft. SW of NE line, and 332 ft. W of E line.
Location.

Houston Oil Co.'s No. 18 W. J. J. Heard, S offset to United Prod. Co.'s well on N side of river.
Drlg. 2,300 ft.

Houston Oil Co.'s No. 17 Rooke (200-ac. tract), S offset to No. 17 P. H. Rooke.
Drlg. 4,550 ft.

United Prod. Co.'s No. 9 Wilson Heard, 2,414 ft. SE along NE property line of Wilson Heard 250-ac. tract, thence at R/A 330 ft. to point of location.
Drlg. shale and hard sand 4,240 ft.

United Prod. Co.'s No. 2 Powers (old well).
Perforated from 5,555-85 ft.; set screen.

COLETO CREEK—VICTORIA COUNTY

Rupert Cox's No. 1 Antone Trybil, R. Manchola Sur.
Derrick.

Houston Oil Co.'s (John F. Camp) No. 1 Maurer, 330 ft. out of NE cor. of Maurer 198 acres in R. Manchola Sur. (W.O.).
T.A. 2,936 ft.

Plummer Oil Co.'s No. 2 Zimmer, W offset to Notex Oil Co.'s No. 2 Zimmer.
Cmtd. csg.; T.D. 2,780 ft.

Albert Plummer's No. 1 Zimmer, 330 ft. NE and SE lines of lease in Manchola Sur. S.D. 5,200 ft.

Plummer Oil Co.'s No. 3 Zimmer, 660 ft. NE of No. 2.
Location.

McFADDIN-O'CONNOR DISTRICTS—VICTORIA AND REFUGIO COUNTIES

Texas Co.'s No. 9 McFaddin.
Location.

SAN FELIPE—WALLER COUNTY

Seaport Oil Co.'s No. 1 J. W. Avery, 330 ft. from E line, 330 ft. from N line of NE cor. of 29-ac. tract, John McFarland Sur.
Coring 2,879 ft.

Sun Oil Co.'s No. 10 B. R. Clay.
Bldg. derrick.

Texas Co.'s No. 1 J. H. Jones, 330 ft. each way from N line and NW lines of lease, Wm. Cooper Sur.
Rig up.

CLAY CREEK—WASHINGTON COUNTY

Sun Oil Co.'s No. 5 J. W. Hunt.
S.D. 1,663 ft.

LOUISE—WHARTON COUNTY

Pure Oil Co.'s No. 3 Charles T. Kountze, 1,980 ft. SE and 330 ft. SW of N cor. of Morris & Cumming Sur., Sec. 9.
Set 10¾-in. csg. at 1,178 ft.

Pure Oil Co.'s No. 1 John Macha, 318 ft. from NW line and from SE line of F. Walnut Sur., and 467 ft. from NE line of 101.53-ac. lease, M.&C. Sur. No. 25.
Location.

Pure Oil Co.'s No. 1 G. F. Wharton Est., 1,497 ft. from SW line and 318 ft. from SE line of F. Walnut Sur., Abst. A-35.
Drlg. shale and sand 1,842 ft.; set 10¾-in. csg. at 1,123 ft.

Pure Oil Co.'s No. 2 Stewart, Morris & Cummings Sur., Sec. 25, 990 ft. out of SW cor. of 169 acres.
Pulled 7-in. csg. to P.B. to around 6,450 ft. and test.

SOUTH LOUISIANA FIELDS

BLACK BAYOU—CAMERON PARISH

Shell Pet. Corp.'s No. 2 State.
Cmtd. surface csg.

Shell Pet. Corp.'s No. 1 A. Watkins, 970 ft. S, 1,990 ft. E of NW cor. of Sec. 17-12s-12w.
Bldg. derrick.

Shell Pet. Corp.'s No. 3 State.
Coring shale and sand 6,757 ft.

Shell Pet. Corp.'s No. 20 Watkins, 1,611 ft. S and 216 ft. W of NE cor. Sec. 18-2s-12w.
Reaming to bottom 4,034 ft.

BOSCO—ACADIA AND ST. LANDRY PARISHES

Superior Oil Prod. Co.'s No. 1 E. Comeauy ("A" Lease), 330 ft. S, 89 deg., 3 min. E. and 250 ft. S, 30 deg., 21 min. W of SW cor. N½ NE Sec. 35-8s-3e.
Location.

Superior Oil Prod. Co.'s No. 3 Comeaux, 1,324 ft. E of NW cor. NE Sec. 34.
Derrick.

Superior Oil Prod. Co.'s No. 2 Arceneaux, 1,968 ft. S and 1,708 ft. W of NE cor. of Sec. 28-8s-3e.
T.D. 8,687 ft.; I.P. 875 bbls. per day; 12/64-in. choke; 1,250 lbs. tubing pressure; 1,450 lbs. csg. pressure.

Superior Oil Prod. Co.'s No. 1 Herbert, 2,095 ft. S and 2,058 ft. E of NW cor. Sec. 35-8s-3e.
Drlg. oil sand 8,687 ft.

Superior Oil Prod. Co.'s No. 5 Larcade, 1,965 ft. S and 483 ft. E of NW cor. Sec. 35-8s-3e.
Derrick.

Superior Oil Prod. Co.'s No. 1 B. Iseringhauser, 330 ft. S and 2,546 ft. W of SE cor. Sec. 27-8s-3e.
Derrick.

Superior Oil Prod. Co.'s No. 3 Iseringhauser, 1,817 ft. E, 330 ft. N of SW cor. Sec. 27.
T.D. 7,851 ft.; set 9⅝-in. csg. at 7,843 ft.; W.O.C.

Superior Oil Prod. Co.'s No. 1 Malancon, 375 ft. S and 63 ft. E of NW cor. SW Sec. 14-8s-3e.
T.D. 8,620 ft.; set 7-in. at 8,573 ft.

Superior Oil Co.'s No. 2 Larcade, 502 ft. N and 1,197 ft. E, SW cor. Sec. 36-8s-3e.
Running tubing; T.D. 8,692 ft.

Superior Oil Prod. Co.'s No. 1 Prejan, 324 ft. N, 330 ft. E of SW cor. NE Sec. 34.
Drlg. sand and shale 3,678 ft.

Superior Oil Prod. Cor.'s No. 1 Lucien Lavergne, 596 ft. E and 330 ft. N of SW cor. of Sec. 27-8s-3e.
T.D. 8,714 ft.; set 7-in. csg. at 8,696 ft.; W.O.C.

Superior Oil Prod. Co.'s No. 1 Moise Lavergne, 269.7 ft. W and 98 ft. N. of SE cor. of Sec. 24-8s-3e.
Drlg. hard sand 6,905 ft.

Superior Oil Prod. Co.'s No. 1 Trahan, 1,702 ft. N, 543 ft. W of SE cor. Sec. 27.
Sidetracked 6,386 ft.

Superior Oil Co.'s No. 1 A. Martinez, 2,510.6 ft. S and 1,057.2 ft. W of NE cor. of Sec. 25-8s-3e.
Drlg. hard sand 9,548 ft.

EDGERLY—CALCASIEU PARISH

Emerson Oil Co.'s No. 1 Paraffine Oil Co.,

945 ft. N and 50 ft. E of SW cor. NE NE Sec. 38-9s-11w.
Location.
Union Sulphur Oil Co.'s No. 3 Hunter, 1,160 ft. N and 220 ft. E of SW cor. SE Sec. 21-9s-11w.
Location.

CAMERON MEADOWS—CAMERON PAR.

Burton-Sutton's No. 1 School Land.
Drlg. shale 4,890 ft.
Burton-Sutton Oil Co.'s No. 4 School Land. 1,891 ft. W and 150 N of SE cor. of Sec. 16-4s-13w.
Derrick.
Magnolia Pet. Co.'s No. 9 Cameron Meadows, 2,266 ft. N and 526 ft. S of NT cor. Sec. 21-14s-13w.
Drlg. shale 652 ft.
[illegible] Co.'s No. 1 Miami Corp.
Drlg. shale 8,269 ft.

CHOCTAW DOME—IBERVILLE PARISH

Standard Oil Co.'s No. 5 Gay, 2,450 ft. S and 425 ft. E of NW cor. of NE Sec. 32-9s-11e.
Derrick.

DOG LAKE—TERREBONNE PARISH

Texas Co.'s No. 11 State, 150 ft. N and 2,474 ft. W, SE cor. Sec. 31-21s-16e.
Derrick.
Texas Co.'s No. 15 State, 2,662 ft. N and 1,308 ft. W, SE cor. Sec. 31-21s-16e.
S.D. 5,233 ft.

GUEYDAN—VERMILLION PARISH

Pure Oil Co.'s No. 6, Alliance Trust, 667 ft. E, 1,787 ft. S line of lease, Sec. 34-11s-1w.
Prepare to sidetrack 6,190 ft.; T.D. 9,379 ft.

HACKBERRY—CAMERON PARISH

Calcasieu Oil Co.'s No. 3 H. C. Hansen. 150 ft. S and 150 ft. E of NW cor. of lease, Sec. 13-12s-10w.
Cmtd. surface csg. 1,225 ft.
Gulf Prod. Co.'s No. 16 Irwin, 770 ft. from N line, 300 ft. from W line of SE cor. Sec. 12-12w-10s.
Drlg. sand and shale 6,624 ft.
Sutton Oil Co.'s No. 1 Miller, 2,29 ft. N and 100 ft. E of SW Sec. 23-12s-10w.
Derrick.
Texas Co.'s No. 13-B State, 400 ft. N of NE cor. of lease, Sec. 13-12s-10w.
Coring sand 6,252 ft.
Calcasieu Oil Co.'s No. 39 Watkins, 807 ft. W, 1,184 ft. N of SE cor. Sec. 13-12s-10w (workover).
T.D. 3,044 ft.; 55 bbls.; comp.
Texas Co.'s No. 14 State, 500 ft. SE of No. 12, Sec. 13-12s-10w.
Location.
Union Sulphur Co.'s No. 4 Humble, 710 ft. N and 330 ft. W of SE cor. Sec. 11-12s-10w.
Coring sand 5,994 ft.; showing oil.
Yount Lee Oil Co.'s No. 1-A Gulf Land, 2,000 ft. S and 50 ft. E of the NW cor. of Sec. 22-12-10.
Rig up.
Yount Lee Oil Co.'s No. 4 Carter, 100 ft. S, 305 ft. W of NE cor. of 30-ac. lease, Sec. 22-12s-10w.
Coring 3,562 ft.
Yount Lee Oil Co.'s No. 12 Gulf Land, 1,625 ft. S and 350 ft. W of NE cor. of NW of Sec. 14-12s-10w.
Rig up.
Yount Lee Oil Co.'s No. 2-A Gulf Land, 1,100 ft. S and 50 ft. E of the NW cor. of Sec. 21-12-10.
Rig up.

NEW IBERIA—IBERIA PARISH

I. Delcambre's No. 1 Viatar, 150 ft. E, 150 ft. S and 150 ft. W of SE cor. of tract, Sec. 41-12s-5e.
S.D. 245 ft.
Harrison & Abercrombie's No. 2 Schwing, beginning at E cor. of Sec. 24-13s-8w, thence southwesterly along section line 3,054 ft., thence NW at R/A 1,121 ft.
P.B. to 2,800 ft.
Texas Co.'s No. 1 Hansen, NE along NW line of lease 508 ft., thence 150 ft. E at R/A, Sec. 54-12s-7e.
Cmtd. surface csg. 45 ft.

IOWA—CALCASIEU AND JEFF DAVIS PARISHES

Magnolia Pet. Co.'s No. 11 Walt, 330 ft. E, 330 ft. N of SW cor. NE SE Sec. 12.
Rig up.
Magnolia Pet. Co.'s No. 4 Willett.
Drlg. brittle shale 6,911 ft.
Shell Pet. Corp.'s No. 2 Joseph Kratzer, 440 ft. N and 440 ft. E of NW cor. NW Sec. 12-9s-4w.
Rig up.
Shell Pet. Corp.'s No. 13 Hyde, 330 ft. W, 330 ft. S of NE cor. NW Sec. 13-9s-7w.
Drlg. hard lime 5,998 ft.
Shell Pet. Corp.'s No. 11 Hyde, 330 ft. E and S of NW cor. NE Sec. 13-9s-7w.
Drlg. sand 6,497 ft.
Shell Pet. Corp.'s No. 10 Hyde.
Running 7-in. csg.; T.D. 6,940 ft.
Shell Pet. Corp.'s No. 3 Tuten, 1,150 ft. W and 330 ft. from S of NE cor. SE Sec. 13-9s-6w.
Washing to bottom 6,649 ft.

JENNINGS—ACADIA PARISH

Simon-Tolson and Gardner's No. 1, 1,020 ft. due E and 250 ft. due W of SE cor. Sec. 46-2s-2w.
Drlg. gumbo 1,085 ft.
Yount Lee Oil Co.'s No. 14 Housierre-Latrielle, 250 ft. N of No. 13, Sec. 47-2s-2w.
Drlg. shale 7,223 ft.

LAKE BARRE—TERREBONNE PARISH

Texas Co.'s No. 12 L.L.&E.
Drlg. shale 3,612 ft.

LAKE HERMITAGE—PLAQUEMINES PARISH

Humble O. & R. Co.'s No. 2 LaFourche Basin Levee Dist.
T.D. 6,472 ft.; plugged with cmt. from 3,300 ft. to 3,600 ft.

LAKE PELTO—TERREBONNE PARISH

Whitstone O. & G. Co.'s No. 1 Buckley, 800 ft. S and E of NW cor. SW SW Sec. 15-19s-16e.
Reaming 3,075 ft.

LAKE WASHINGTON—PLAQUEMINES PARISH

Humble O. & R. Co.'s No. 23 Cockrell-Moran, 660 ft. N and 21 deg. 30 min. E of No. 1 in Twp. 20s-26e.
T.D. 4,337 ft.; swbng.; 2,800 ft. of fluid in hole.

LEESVILLE—LAFOURCHE PARISH

Gulf Prod. Co.'s No. 2 Allen.
P.B. to 3,900 ft.
Gulf Prod. Co.'s No. 5 Allen.
Derrick.
Gulf Prod. Co.'s No. 10 Bernard, 1,833 ft. E, 958 ft. S of NW cor. Sec. 26-21s-22e.
Derrick.
Gulf Prod. Co.'s No. 2 Community, 50 ft. W and 1,300 ft. E of NW cor. Sec. 26-21s-22e.
Drlg. 2,122 ft.
Emerald Pet. Co.'s No. 10 State, west bank. 300 ft. S of well No. 1.
Location.
Emerald Pet. Co.'s No. 11 State, east bank. 227 ft. N of well No. 1.
Location.
Emerald Pet. Co.'s No. 12 State, east bank. 250 ft. S of well No. 1.
Location.
Frank L. Hill's No. 1 Bernard, 1,422 ft. N and 808 ft. E of SW cor. Sec. 26-21s-22e.
T.D. 3,718 ft.; I.P. 600 bbls. through ¾-in. choke; comp.
Leesville Oil & Gas Co.'s No. 1 Southern Louisiana Canal Navigation Co., 35 ft. W of Bank of Bayou, 15 ft. N of S bank, Sec. 26-21s-22e.
T.D. 4,189 ft.; P.B. to 1,200 ft.
Texas Co.'s No. 21 L.L.&E., Sec. 26-21s-22e
T.D. 4,925 ft.; P.B. to 3,555 ft. and sidetracked; cmtd. csg. 3,700 ft.
Texas Co.'s No. 28 L.L.&E.
Drlg. shale 3,803 ft.

LOCKPORT—CALCASIEU PARISH

Magnolia Pet. Co.'s No. 12 Bordages, 961 ft. W and 93 ft. N of SE cor. N½ NE Sec. 8-16s-19w
Washing over stuck D.S. 7,340 ft.
Union Sulphur Co.'s No. 1 Moss (W.O.).
Drlg. shale 5,574 ft.

PORT BARRE—ST. LANDRY PARISH

Gulf Prod. Co.'s No. 9 Wilson Cochran, Sec. 26-22s-1e.
Rig up.

ROANOKE—JEFFERSON DAVIS PARISH

Humble O. & R. Co.'s No. 1 Taylor, 440 ft. E and 440 ft. S of NW cor. SW Sec. 13-9s-4w.
Drlg. shale 7,730 ft.
Humble O. & R. Co.'s No. 1 R. C. Jarnegan, 440 ft. S, 440 ft. E of the NW cor. SE Sec. 13-9s-4w.
Coring shale 7,400 ft.
Humble O. & R. Co.'s No. 3 Devilbiss, 1,-399 ft. W, 466 ft. S of NE cor. Sec. 14-9s-4w.
Coring sand 9,397 ft.
Shell Pet. Corp.'s No. 1 Jarnigan, 330 ft. E, 660 ft. S, NW cor. Sec. 13-9s-4w.
Coring sand 9,446 ft.
Shell Pet. Corp.'s No. 1 Carter, 660 ft. N and 330 ft. W of SE cor. NW Sec. 1-9s-4w. 13⅜-in. csg. at 2,523 ft.
Shell Pet. Corp.'s No. 2 Kratzer, 440 ft. N and 440 ft. E of SW cor. NW Sec. 12-9s-4w.
Rig up.

SORRENTO—ASCENSION PARISH

Union Sulphur Co.'s No. 26 United Land.
Drlg. salt 5,921 ft.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 2 Noble, E of No. 1.
Drlg. gravel 853 ft.
Union Sulphur Co.'s No. 790 fee, 929 ft. S and 802 ft. W of C Sec. 29-9s-10w.
Drlg. sand 5,075 ft.
Union Sulphur's No. 2 Uldrick, 500 ft. N of No. 1.
Drlg. wtr. sand 5,408 ft.
Union Sulphur Co.'s No. 3 Kelly, 1,345 ft. S, 198 ft. W of the NE cor. of Sec. 30-9s-10w.
P.B. to 4,043 ft.

WHITE CASTLE—IBERVILLE PARISH

Shell Pet. Corp.'s No. 9 Wilburn, 300 ft. E of No. 7.
T.D. 7,270 ft.; milling on csg. at 6,364 ft.

MISCELLANEOUS WILDCATS

TEXAS

AUSTIN COUNTY

Quintana Oil Co.'s No. 1 L. S. Hillboldt. M. N. Allen League.
Drlg. shale 2,940 ft.
J. S. Wheeless et al's No. 1 Lewis Wittenburg, 330 ft. S and 1,100 ft. from W line of 202.5-ac. tract, Sec. 179, H.&T.C Sur.
Abd. 5,636 ft.

BRAZORIA COUNTY

Amerada Pet. Corp.'s No. 1 Houston Farm Dev. Co., 1,414 ft. N, 316 ft. W of SE cor. of L. Bachelder Sur.
Surveying hole; T.D. 7,667 ft.
C.&R.G. Drlg. Co.'s No. 1 Frank Trukes, 200 ft. from S and 1,000 ft. from E lines of 75-ac. tract, Sec. 7, H.T.&B.R.R. Sur.
S.D. 7,890 ft.
Holt et al's No. 1 Griffith, J. B. Bailey Sur
T.D. 4,200 ft.; waiting orders.
Stanolind Oil & Gas Co.'s No. 1 J. W. Surface, 466 ft. N and 400 ft. W of most easterly SE cor. of 75.9-acre tract, A.C.H &B. Sur., Abstr. 462.
Running csg.; T.D. 5,990 ft.

CALHOUN COUNTY

Continental Oil Co.'s No. 1 American Nat. Realty Co., C of NE of Sec. 6, Blk. C.
Preparing to work over.

CHAMBERS COUNTY

Humble O. & R. Co.'s No. 1 Middleton, 466 ft. each way out of the SW cor. of survey
Drlg. 475 ft.; set 20-in. at 103 ft.
Sun Oil Co.'s No. 1 Hamilton 1,400 ft. from N line, 1,400 ft. from W line of survey T.&N.O. Sur., Sec. 128.
Drlg. shale and lime 6,310 ft.

COLORADO COUNTY

Coyle-Concord Oil Co.'s No. 1 Nelson, 2,200 ft. SE of NW cor. of Sec. 2,200 ft. SW at right angles in L.&G.N. Sur.
S.D. 6,194 ft.

FORT BEND COUNTY

Benedum & Trees' No. 1 Jacob Hensler Charles D. Sayers Sur.
Coring shale 5,897 ft.
W. A. Shafer et al's No. 1 V. B. Bortash, 693 ft. SW of NE line and 1,003 ft. NW of SE line of Sec. 52, H.&T.C. Sur.
S.D. 2,900 ft.

GALVESTON COUNTY

Gillock Pet. Co.'s No. 2 Maco Stewart, 900 ft. N and 150 ft. W of No. 1, Alex Farmer Sur.
T.D. 1,500 ft.; waiting on surface pipe
S.D.
H. E. Sedberry, trustee's No. 1 Thomas Shaw (200 acres), 150 ft. NW line, 161 ft. NE line, Lot 66, Sec. 7, Hall & Jones Galveston Island.
10¾-in. csg. at 1,279 ft.; T.D. 1,330 ft.

GRIMES COUNTY

Hubert Holt et al's No. 1 Simon Fuqua 1,300 ft. N of S line and 400 ft. W of E line of 177-ac. lease and survey, Moses Evans Sur.
No report.
Dr. Marshall et al's No. 1-B Todd, 300 ft from E line and 175 ft. from N line of 150-ac. tract in extreme NW cor. of county (25 ft. N of No. 1).
No report.
Roan et al's No. 1 S. W. Sealy, 3,474 ft. N of S line and 850 ft. E of W line of survey, B. F. Smith Sur., 2 miles SW of Kellum Springs.
Location.

HARRIS COUNTY

American Liberty Oil Co's No. 1 M. M. Graves, 1,403 ft. N of S line and 467 ft. E of W line of J. W. Bryan Sur.
10¾-in. csg. at 603 ft.; T.D. 750 ft.
Esco Oil Co.'s No. 1 E. P. Soureau, 3,333 ft. from W line and 2,215 ft. from S line of 350-ac. tract, W. P. Harris Sur., Abst. A-30.
Drlg. 728 ft.
Goldston et al's No. 1 Weingarten, 467 ft. out of NE cor. of H.&T.C. Sur., Sec. 39.
Rig up.
T. S. F. Oil Co.'s No. 1 J. B. Hine, Arthur McCormick Sur., Abst. 46.
12½-in. csg. at 320 ft.; T.D. 450 ft.
C. C. Foster and others' No. 1 H. K. Johnson, 2,000 ft. from S line and center of E and W lines of G.C.&S.F. Sur.
Drilled 25 ft. and S.D.
W. U. Paul's No. 1 E. M. House, 3,300 ft. N and 1,000 ft. E of NE cor. of E. Benson Sur. in M. Magruder Sur.
Washing over stuck D.S.; T.D. 7,320 ft.

HOUSTON COUNTY

Gem Oil Co.'s No. 1 A. B. Buffington et al, 1,000 ft. from N and 1,200 ft. from most easterly W line of 165.9-ac. tract, J. M. Prado Sur.
Location.

JACKSON COUNTY

Atkins & O'Neil's No. 1 Hodges, C Sec. 22, Blk. 1, I.&G.N. Sur.
Prepare to make D.S. test; T.D. 5,281 ft.
Humble O. & R. Co.'s No. 1 Lowrance, 660 ft. from SW and SE lines of Wilson Sur. No. 5.
Abd. 6,728 ft.

JEFFERSON COUNTY

Navarro Oil Co.'s No. 1 Talliver, 1,570 ft. from N line and 870 ft. from W line of Shadric Morris Sur.
Drlg. shale and sand 3,200 ft.
Sun Oil Co.'s No. 1 H. Long, 1,500 ft. E line, 990 ft. E line of lease.
Drlg. shale 8,764 ft.
Sun Oil Co.'s No. 1 Hebert & Braussard, 6,-890 ft. NW along SW line and 660 ft. NE at right angles to SW line, B. Blackman Sur., Abstract No. 2.
Building derrick.

LAVACA COUNTY

L. A. Douglas' No. 1 Matt Pustka, 330 ft. S and W lines of 139-ac. tract, in Moses Mitchell Sur.
Set 10-in. csg. 150 ft.
Humble O. & R. Co.'s No. 1 C. S. Wilson, 330 ft. out of SW cor. of Crenshaw Sur.
Drlg. shale 5,621 ft.

LIBERTY COUNTY

R. M. Bruner et al's No. 1 N. Bell, 150 ft from N line and 150 ft. from W line of Bell's 187-ac. tract, H.&T.B. Sur. No. 4.
Rigging up.
Extension Oil Co.'s No. 1 J. A. Lovett, 200 ft. from E and 600 ft. from S line of lease, P. P. Deevers Sur.
S.D. 3,593 ft.
Liberty-Independent Oil Co.'s No. 1 J. M Neal, 2,550 varas from E line and 500 varas from N line of Samuel Strong Sur.
No report.
A. L. Maxwell's No. 1 M. D. Hinclift, 300 ft. from E line and 1,000 ft. from N line of H.&T.C. Sur. No. 150.
Location.
Thomas et al's No. 1-A Ecke, 660 ft. from W line and 2,350 ft. from S line of tract in Green Sur.
T.D. 5,047 ft.; 6⅝-in. csg. at 5,029 ft.
Turnbull and Irwin's No. 1 Lynott and Buttum, 466 ft. S and E of NW cor. of SE 100 acres of W 400 acres of 856-ac. tract James Robeson Sur
Tested S.W. at 7,428 ft.; T.D. 7,511 ft.; S.D.

MADISON COUNTY

Sunray Oil Co.'s No. 1 Ferguson, 1,000 ft. S and 750 ft. E of SE cor. of Francis Fulcher Sur.
Abd. location.
Texas-New York et al's No. 1, 3,000 ft. E and 1,750 ft. S of NW cor. of J. H. Pearson Sur.
Bldg. derrick.

MATAGORDA COUNTY

Cockburn Oil Co.'s No. 6 Hawkins, 2,600 ft. from NW line, 1,200 ft. from SW line of McCarthy Sur.
Derrick.
Griffith's No. 1 fee, 4,000 ft. from E line and 3,000 ft. from W line of Wm. B Bell Sur.
Rig up and S.D.

MONTGOMERY COUNTY

Reynolds Drlg. Co. et al's No. 1 Mrs. Clara B. Stewart, 330 ft. S and E of most easterly inner cor. of 595-ac. tract, John Corner Sur.
Cmtd. 10¾-in. csg. at 825 ft.; T.D. 900 ft.

ORANGE COUNTY

Sinclair Line Oil Co.'s No. 1 Godwin, Richard Sallew Sur., 300 ft. from E line and 150 ft. from NE line of Godwin 20-ac. tract.
S.D. 2,703 ft.

POLK COUNTY

C. & C. Drlg. Co.'s No. 1 Granbury & Smith, 600 ft. N and 600 ft. W from most western NW cor. of Gulf Prod. Co.'s Graybury & Smith lease, in the Wm. Shadburn Sur.
Location.
Howard Dailey et al's No. 1 Z. B. Knox, 1,450 ft. W and 1,920 ft. S of NE cor. of F. Chairs Sur., 1½ miles NE of Corrigan.
S.D. 60 ft.
J. F. Anderson's No. 1 B. I. Duke (O.W.D. D.), 400 ft. from E and 350 ft. from S of SW cor. of P. Michelick 50-ac. lease, Abst. 50, P. J. Mineral Sur.
Waiting on a new mud pump; T. D. 5,-804 ft.
Dick Schwab's No. 1 Lynch, 330 ft. out of NW cor. of 200-ac. tract in the George Jameson Sur.
Location.

REFUGIO COUNTY

Cecil Hagen et al's No. 1 Edith Clarkson, 1,736 ft. from N line, 2,630 ft. from E line of J. Coughlin Sur.
Location.

SAN AUGUSTINE COUNTY

Fidelity Exploration Co.'s No. 2 Bryan & Flourney, 400 ft. from No. 1.
Drlg. sandy shale 935 ft.

VICTORIA COUNTY

Texas Co.'s No. 1 Irene Foster, 55° N, 2,-900 ft. E, and 35° E, 980 ft. from W of NW cor. of Sec. 10, F.&N.O. Sur.
Blew out while coming out of hole; making gas and S.W.; T.D. 3,100 ft.

WALKER COUNTY

Seaport Oil Co.'s No. 1 W. B. Ross, in SE cor. of an 80-ac. tract out of the Wm. Hodge Sur.
Moving in rig.
Texas Co.'s No. 1 Thompson Bros. Lbr. Co., beginning at NW cor. of survey on Trinity River, thence N 55 deg., E 2,640 ft. S 35 deg., E 7,111 ft.
Tested fresh wtr.; abd.

WALLER COUNTY

Stanolind O. & G. Co. et al's No. 1 J. W. Tharp, 466 ft. from S and E lines of J. M. Bennett Sur. No. 100.
Coring 6,171 ft.

WHARTON COUNTY

Whitehead and Rash's No. 1 C. T. and D. Kountze, 1,320 ft. from N line, 330 ft. from E line of S.A.&M.G. Sur., Sec. 1, Abst. 328.
Location.

SOUTH LOUISIANA

ACADIA PARISH

Humble O. & R. Co.'s No. 1 American Rice Mills, 660 ft. S and 1,320 ft. W from NE cor. Sec. 27-10s-1e.
Drlg. sand and shale 5,322 ft.
Superior Oil Co. et al's No. 1 A. S. Newman, 2,000 ft. N and 1,120 ft. E of SW cor. Sec. 24-7s-1w.
Building derrick.

ASCENSION PARISH

Humble O. & R. Co.'s No. 2 S. Gumbel & Co., 500 ft. southwesterly from No. 1, 275 ft. easterly from road and approx. 475 ft. N of S line of tract, Sec. 33-10s-2e.
Reaming 4,972 ft.

AVOYELLES PARISH

Southern State Pet. Co.'s No. 1 Boyette, 330 ft. N and 330 ft. E of SW cor. Sec. 28-3n-5e.
Rig up.

BEAUREGARD PARISH

Gulf Ref. Co.'s No. 1 Lutcher Moore, 660 ft. from S line, 760 ft. from E line, NE Sec. 25-4s-12w.
Drlg. hard shale 8,354 ft.
Richardson & Martin's No. 1 Southwest Lbr. Co., SW Sec. 6-5s-12w.
Location.

CALCASIEU PARISH

Fohs' No. 1 O. H. Castle, 330 ft. S and 330 ft. W of C Sec. 18-9s-3w.
Drlg. shale 6,536 ft.
Gulf Prod. Co.'s No. 1 H. Starks et al, 1,650 ft. W and 1,980 ft. S of NE cor. Sec. 26-11s-12w.
Bldg. road.
Humble O. & R. Co.'s No. 1-B Industrial Lbr. Co., 466 ft. N, 1,399 ft. W of the SE cor. Sec. 27-8s-12w.
Drlg. sticky shale 7,681 ft.
Plummer & McDaniels' No. 1 Cockburn-Hood, 1,072 ft. E and 2,400 ft. N of SW cor. Sec. 12-10s-12w.
Drlg. sand and granite 3,570 ft.
Union Sulphur Co.'s No. 1 Powell Lbr. Co., 600 ft. N of No. 1 State, Sec. 12-9s-8w.
Rig up.
Wheeler Oil Co.'s No. 1 Gabbert, 1,323 ft. E and 548 ft. N of SW cor. of Sec. 35-9s-7w.
Drlg. lime pyrites 6,385 ft.

EAST FELICIANA PARISH

Thompson Creek Oil Co's No. 1 Fannie Noland, 2,600 ft. E and 1,580 ft. N of SW cor. Sec. 70.
S.D. 1,490 ft.

EVANGELINE PARISH

Humble O. & R. Co.'s No. 1 Hass, 1,250 ft. SE of Bayou Nespique, 466 ft. NE of SW line of Sec. 23-4s-1w.
Reaming 6,897 ft.

CAMERON PARISH

Texas Co.'s No. 10-A State, 16,855 ft. W and 3,270 ft. N of NE cor. Sec. 1-14-9w in Twp. 13s-9w.
S.D. 6,784 ft.
Texas Co.'s No. 1 Jessen, 1,170 ft. E and 550 ft. N of C Sec. 24-14s-10w.
Drlg. sandy lime 4,560 ft.

JEFFERSON DAVIS PARISH

George W. Strake's No. 1 Calcasieu Natl.

Bank, 200 ft. S and E of NW cor. SE NE Sec. 12-9s-6w.
Drlg. shale 6,210 ft.
Texas Co.'s No. 1 Bayou St. Dennis, 20,907 ft. S, 4,853 ft. E of NW cor. of Twp., Sec. 19-17s-24e.
Dredging canal.

LAFOURCHE PARISH

Barnadall Oil Co.'s No. 2 Harang Plantation.
T.D. 6,586 ft.; P.B. to 4,303 ft.
Emerald Pet. Co.'s No. 1 Bowie Lumber Co., 4,421 ft. N and 1,632 ft. E of SW cor. Sec. 53-10s-8e.
Prepare to sidetrack; drlg shale and shells 4,830 ft.
R. L. Gay, trustee's No. 1 Godchaux, 3,924 ft. N and 1,746 ft. E in common cor. of Lots 24 and 26, Twp. 15s-19e.
S.D. 6,326 ft.
Southern Sulphur Corp.'s No. 1 D. L. Lagraize, 800 ft. E of NW cor. of Lot 7, thence 250 ft. S of Sec. 26-21s-22e.
Spudded and S.D.

PLAQUEMINES PARISH

Venice Corp.'s No. 1 Burras.
S.D. 1,558 ft.

RAPIDES PARISH

J. B. Evers' No. 1 G. Wettermark, 540 ft. S and 530 ft. E, NW cor. NE SW Sec. 35-3n-3e.
Rig up and S.D.
C. D. Loe's No. 1 Barrett, 330 ft. NW of SE line and 330 ft. NE of SW line of Sec. 40-5n-1w.
Rig up and S.D.

ST. BERNARD PARISH

Danciger's No. 1 Battles, 836 ft. N, 2,196 ft. W of SE cor. Sec. 135-14s-14e.
S.D. 6,001 ft.

ST. LANDRY PARISH

Bailey Gaunce's No. 1 Lewis, 300 ft. N and E of SW cor. of NW of NE of Sec. 29-5s-6e (workover).
Prepare to make drill stem test; T.D. 5,-043 ft.
H. J. Weir's No. 1 Declouet, Sec. 108-8s-5e, near Lafayette Parish line and 3 miles N of Anse La Butte Field.
S.D. 2,322 ft.

ST. MARTIN PARISH

Texas Co.'s No. 6 St. Martin Land Co., 660 ft. S and 500 ft. W of NE cor. SE Sec. 17-8s-7.
T.D. 9,612 ft.; no report.

VERMILLION PARISH

Moore Bros.' No. 1 Brussard, 350 ft. S of N line, 250 ft. E of W line, NE cor. Sec. 32-11s-3e.
T.D. 4,056 ft.; fishing.

Kansas Wildcats

(Continued from Page 62)

GREENWOOD COUNTY

Kite et al's No. 1 Jamison, SW SE NE Sec. 30-26-13.
S.D. 525 ft.

HARVEY COUNTY

O. J. Connell et al's No. 1 Roth, SW cor. Sec. 16-23-3w.
Spudded and S.D.
Imo O. & G. Co. et al's No. 1 Sperling, SE NE NE Sec. 33-23-2.
Chat 2,940-48 ft.
Wenzel et al's No. 1 Schrag, NW SE Sec. 24-23-3w.
T.D. 587 ft.; S.D. for csg.

KINGMAN COUNTY

Magnolia Pet. Co.'s No. 1 Bartholomew, SE SE SW Sec. 30-27-4w.
Rigging up.

McPHERSON COUNTY

Lario O. & G. Co.'s No. 1 Base, SW cor. Sec. 22-20-2w.
Building rig.
C. W. Lamer et al's No. 1 Rolander, NE NE NW Sec. 8-18-2w.
Set 6-in. 3,030 ft.; T.D.
Roth-Farout et al's No. 1 Bestwater, SE SW SE Sec. 23-20-1w.
T.D. 3,008 ft.; U.R. 8-in. csg.
Stafford et al's No. 1 Krehbiel, NW NW SE Sec. 27-21-3w. (O.W.D.D.)
C.O. at 2,080 ft.

NESS COUNTY

Texas Co. and Gypsy Oil Co.'s No. 1 Goodman, C SW SW Sec. 21-19-22w.
K.C. lime 3,771 ft.; drlg. 3,790 ft.

OSAGE COUNTY

Jim Edwards' No. 1 Detrich, C NW SE Sec. 21-14-15.
Spudded and S.D.

OSBORNE COUNTY

Carmen & Hershey's No. 1 Fritz, C NE NE Sec. 9-10-14w.
Simpson 3,651 ft.; H.F.W. 3,675-80 ft; will run csg.

PRATT COUNTY

Atlantic Oil Prod. Co.'s No. 1 Prentice, C SE NW Sec. 18-28-14w.
Rigged up.

RENO COUNTY

Foraker et al's No. 1 Hiett, SE SW NE Sec. 24-24-4w.
Drlg. 1,280 ft.
Johnson & Carey et al's No. 1 Dyck, SE NE SE Sec. 35-22-5w.
Location.
McBride et al's No. 1 Popp, SW SW NE Sec. 32-24-4w.
Wilcox 3,879-82 ft.; H.F.W.; S.D.
Privett Drlg. Co.'s No. 1 Crotta, NE NW NE Sec. 27-26-10w.
H.F.W. 3,055 ft.; T.D. 3,090 ft.; S.D.

RICE COUNTY

Foraker, Nickerson et al's No. 1 Lyon, SE NW Sec. 27-20-8w.
S.D. 1,060 ft.
Gypsy Oil Co.'s No. 1 Dotson, SW SW NW Sec. 25-20-10w.
Drlg. 2,292 ft.
Johnson & Carey et al's No. 1 Dyck, SE NE SE Sec. 35-22-5w.
12-in. 770 ft.; T.D.
Lario O. & G. Co. and Reserve Pet. Co.'s No. 1 Shepherd, SW SW NW Sec. 18-22-5w.
Mississippi lime 3,565 ft.; set 8-in. 3,-585 ft.
Lario O. & G. Co. et al's No. 1 Schrag, NW SE SW Sec. 22-19-4w.
Drlg. 1,615 ft.
Stark & Weil's No. 1 Smith, NW cor. Sec. 30-19-8w.
Location.
Langston et al's No. 1 Markle, NE SW Sec. 1-20-9w.
Show of oil 2,880-2,906 ft.; S.D.
Yingling et al's No. 1 Maupin, NW SW SW Sec. 1-18-8w.
Viola 3,233-39 ft.; T.D. 1,300 ft.; oil in hole.

ROOKS COUNTY

Stearns & Streeter's No. 1 Meyers, NE NW NW Sec. 34-9-16w.
8-in. csg. 2,254 ft.; drlg. 2,415 ft.

RUSH COUNTY

Corbett, Barbour et al's No. 1 Schmidt, SW SW SE Sec. 10-17-16w.
Siliceous lime 3,575-3,600 ft.; H.F.W.; Dry and abd. 3,732 ft.
Flynn et al's No. 1 Hartman, SW SE NW Sec. 4-18-16w.
Location.
Lario O. & G. Co. and Phillips Pet. Co.'s No. 1 Benbow, NW NE NE Sec. 13-17-19w.
15-in. 493 ft.; drlg. 830 ft.

RUSSELL COUNTY

J. Brouk and R. D. Bailey's No. 1 Kluesner, NW SE Sec. 34-15-12w.
Rig.
Blair et al's No. 1 Fink, SW NW SE Sec. 16-14-14w.
Rigging up.
Eldorado Ref. Co.'s No. 1 Stratman, SW SE SE Sec. 32-14-11w.
H.F.W. 3,245 ft.; T.D. 3,250 ft.; abd.
Darby Pet. Co.'s No. 1 Jarus, NW SW NE Sec. 16-16-12w.
8-in. csg. 3,024 ft.; C.O.
Hartman & Blair's No. 1 Sullivan, NE NE SE Sec. 2-14-15w.
Rig.
Hartman & Blair's No. 1 Gurney, SE SE NW Sec. 23-14-14w.
Rig.
Lario O. & G. Co. et al's No. 1 Nuss, NW SW SW Sec. 11-16-14w.
Location.
Lario O. & G. Co. et al's No. 1 Moore, 760 ft. S and 660 ft. E, NW cor. Sec. 34-12-12w.
Cellar.
Tom Palmer et al's No. 1 Herbel, NW SW Sec. 4-12-11w.
H.F.W. 3,390 ft.; drlg. 3,420 ft.
Wolf Creek Oil Co.'s No. 1 Donovan, SW SW SE Sec. 10-15-15w.
Rigging up.
Wolf Creek Oil Co.'s No. 1 Kraft, SW cor. Sec. 26-16-11w.
Cellar.

SALINE COUNTY

J. Brouk and R. D. Bailey's No. 1 Kluesner, NW NW SE Sec. 34-15-2w.
Location.
Dister et al's No. 1 Herrington, NE NW SE Sec. 3-13-1w.
S.D. 1,785 ft.

SCOTT COUNTY

Atlantic Oil Prod. Co.'s No. 1 Vaniman, C SE NE Sec. 15-20-33w.
6-in. liner 4,650 ft.; pay 4,670-80 ft.; 2,-600 ft. of oil in hole.

SEDGWICK COUNTY

Aladdin Pet. Co. et al's No. 1 D. Lauck, SE NE NW Sec. 21-28-2.
Rig.
Allison & Fitzwilliams et al's No. 1 Struthers, NE SW Sec. 34-28-3w.
H.F.W. 3,176-87 ft.; T.D. 3,213 ft.; U.R. 8-in. csg.
Cameron, Derby Oil Co. and Trees' No. 1 Brainard, SW SE NW Sec. 19-24-2.
Rigging up.
Leo Keller et al's No. 1 Russell, SW SW NW Sec. 16-29-2.
Cellar.
Syndicate O. & G. Co. et al's No. 1 Ratzlaff, NE NW NW Sec. 20-26-2.
Sand 2,975-78 ft.; 5 bbls. of oil in 2 hrs.; T.D. 3,100 ft.

STAFFORD COUNTY

Atlantic Oil Prod. Co.'s No. 1 Hohner, NW SE SE NE Sec. 31-23-14w.
Location.
Atlantic Oil Prod. Co. and Phillips Pet. Co.'s No. 1 Guthrie, C NW NW Sec. 15-25-11w.
12-in. csg. 1,454 ft.; drlg. 2,100 ft.

SUMNER COUNTY

T. Palmer's No. 1 Wentworth, NW NW NE Sec. 9-35-2.
Drlg. 580 ft.

TREGO COUNTY

Central Commercial's No. 1 Wagg, NW NW SE Sec. 17-12-21w.
Rig.
Marathon Oil Co.'s No. 1 Kline, SW SE Sec. 19-14-24w.
Drlg. 4,936 ft.

La.-Ark. Wildcats

(Continued from Page 71)

Lawson-Leavell's No. 1 Whitney Corp., 330 ft. N and E, SW cor. NE SW Sec. 5-9-13.
Fishing for D.S. 3,005 ft.
Jack Lent's No. 1 Williams, Sec. 13-7-11.
Rigging up.
Zan Lloyd's No. 1 Henderson, 330 ft. N and W, C Sec. 29-9-13.
Abd.; will not pump at 2,031 ft.
Dr. O. B. Hicks' No. 1 Neal, SE SW SE Sec. 18-9-13.
Set 10-in. 40 ft.

TENSAS PARISH

Schumacher, tr.'s No. 1 Curry, Sec. 39-11-12e.
Arranging to deepen 3,750 ft.

UNION PARISH

Carbons Consolidated's No. 1 Beasley, 1,050 ft. S, 150 ft. E, NW cor. Sec. 6-21-4e.
Comp. for 4,000,000 ft. gas at 3,200 ft.

ARKANSAS

ARKANSAS COUNTY

Grand Prairie Realty Co.'s No. 1 Fischer, 200 ft. S and E, NW cor. NE NW Sec. 6-6s-4w.
Coring 965 ft.

HEMPSTEAD COUNTY

Ark. Drlg. Co.'s No. 1 Jones, 1,000 ft. S, 600 ft. W, NE SE Sec. 11-14-24.
Dry and abd. 3,055 ft.
B. A. Austin's No. 1 McWilliams, 300 ft. N and W of SE cor. NW SW Sec. 19-13-23.
Drlg. 2,035 ft.
A. H. Bagnelle's No. 1 Trattner & Rhinehart, Sec. 2-13-26.
S.D. 1,992 ft.
F. W. Martin & Co.'s No. 1 Lafferty, 500 ft. N and W SE cor. NW Sec. 17-14-24.
P.B. to 2,200 ft.

LAFAYETTE COUNTY

Benedum & Trees' No. 2 Bodcaw, C SE SE NE Sec. 19-16-23.
Dry at 5,032 ft.
Douglas Lawn's No. 1 Camp, 330 ft. S and W, NE cor. SW SE Sec. 14-15-23.
S.D. 2,910 ft.
W. H. Harvey's No. 2 Allen, Sec. 18-19-24.
Drlg. 380 ft.
A. H. Tarver's No. 1 Russell, 330 ft. S and W, NE cor. NW Sec. 13-17-25.
Drlg. 2,929 ft.

MILLER COUNTY

Duluth-Ark. Oil Co.'s No. 4 Beck, SE cor. SE SW Sec. 34-15-26.
Reaming to set 5 3/16-in. 2,941 ft.
Fitzwater et al's No. 1 Norson, SW cor. SE SW Sec. 20-15-27.
S.D. 3,177 ft.
Ark. Oil, Gas & Ref. Co.'s No. 1 Beck, SW cor. NW SW Sec. 34-15-26.
1,200 ft. oil in hole at 2,820 ft.
King Oil Corp.'s No. 1 C. H. Schroder, 200 ft. N, 330 ft. E, SW cor. SW NE Sec. 24-14-28.
S.D. 3,020 ft.
A. C. Roan's No. 1 Frost Est., 150 ft. N and W, SE cor. SE SW Sec. 8-15-26.
Set 10-in. 120 ft.
Lee Timberlake's No. 1 Frost Est., 330 ft. N and E, SW cor. SW SE Sec. 27-15-26.
Drlg. 975 ft.

NEVADA COUNTY

O. F. Whittaker's No. 1 Wesley, Sec. 3-15-20.
Set 10-in. 106 ft.; drlg. 1,150 ft.

OUACHITA COUNTY

F. A. Book et al's No. 1 Arnold, Sec. 34-15-16.
S.D. 2,022 ft.
T. J. Gaughan's No. 1 Bragg, 330 ft. N and E, SW cor. NE SE.
Set 6⅝-in. 1,380 ft.

UNION COUNTY

Alice-Sidney Oil Co.'s No. 8 Gregory, C NW NW SW Sec. 11-17-14.
Set 10-in. 152 ft.; drlg. 1,335 ft.
Bellevue Corp.'s No. 1 J. M. Gregory, C SE SW NE Sec. 10-17-14.
Rigging up.
T. L. James & Co.'s No. 1-A W. H. Perdue, 330 ft. N and W, SE cor. NE NW Sec. 10-17-14.
Set 10-in. 141 ft.; drlg. 2,830 ft.
Jovian Oil Corp.'s No. 1 Perdue, 150 ft. N, 650 ft. E, SW cor. NW SE Sec. 3-17-14.
Coring 3,295 ft.
Mrs. R. K. Jones et al's No. 1 J. Davis, 330 ft. N and W, SE cor. NW NW Sec. 28-16-14.
Sidetracking 6⅝-in. 2,320 ft.
Lion Oil Ref. Co.'s No. 10-A Fienniken, 300 ft. N, 630 ft. E, C Sec. 10-16-15.
W.O.S.R. 2,408 ft.
Joe Modisette's No. 1 Union Saw Mill Co., 330 ft. S and W, NE cor. NW SE Sec. 14-18-14.
Dry and abd. 2,666 ft.
C. E. Murdock, Inc.'s No. 7 J. M. Gregory, 330 ft. N, 330 ft. W, SE cor. NE SE Sec. 10-17-14.
Set 10-in. 130 ft.; drlg. 2,235 ft.
Rester Oil Co., Inc.'s No. 1 J. L. Kinard, 330 ft. S and E, NW cor. SE NW Sec. 32-18-14.
W.O.S.R. 2,189 ft.
S. H. A. Oil Co.'s No. 2 J. W. Taylor, 330 ft. S and W, NE cor. NW SE Sec. 10-17-14.
Testing 3,335 ft.
Marine Oil Co.'s No. 1 Townsend, 330 ft. N and E, SW cor. SW NE Sec. 10-17-14.
Set 10-in. 150 ft.
Skelly Oil Co.'s No. 6 W. H. Perdue, C SE SE NW Sec. 10-17-14.
Set 10-in. 177 ft.; drlg. 1,520 ft.
Tubal Pet. Co.'s No. 1 Gaddy, 340 ft. N and E, SW cor. SE NW Sec. 14-17-14.
S.D.; W.O. 3,416 ft.

WOODRUFF COUNTY

L. P. Lively's No. 1 Perkins, 330 ft. N, 360 ft. E, SW cor. SE SE Sec. 5-5n-2w.
Rigging up.
J. N. Watkins et al's No. 1 Upshaw, 330 ft. N and E, SW cor. NW SW Sec. 17-5n-2w.
Rigging up.

MISSISSIPPI

AMITE COUNTY

Mineral Resources, Inc.'s No. 1 Anderson, C NE NW Sec. 14-3n-3e.
S.D. 550 ft.

BOLIVAR COUNTY

White & Jones' No. 1 Ballou, SE SE NW Sec. 17-24n-7w.
S.D. 20 ft.

GREENE COUNTY

United Gas Pub. Service Co.'s No. 1 Greene County School Land, W½ W½ Sec. 16-1n-5w.
Drlg. 5,300 ft.

HARRISON COUNTY

Big Ridge Oil Co.'s No. 1 Hinzin, NE Sec. 13-7s-10w.
Set 6-in. 1,060 ft.; testing 1,100 ft.

HINDS COUNTY

Atkins & Hightower's No. 2 Sander, 660 ft. E, 160 ft. N, SW cor. NW SW Sec. 30-4n-2e.
Drlg. 300 ft.
City of Canton's No. 2 Belhaven, 50 ft. NW of C Sec. 25-6n-1e.
Comp.; 37,400,000 ft. gas 2,458 ft.

ISSEQUENA COUNTY

Pelican Oil & Gasoline Co.'s No. 1 Martin & Bender, 300 ft. S and E, NW cor. Sec. 11-13n-3w.
Drlg. 2,900 ft.

JONES COUNTY

Snow-Black Pet. Co.'s No. 2 Watson, 530 ft. W, 300 ft. S, C Sec. 34-7n-13w.
T.A. 3,900 ft.

LAUDERDALE COUNTY

Bob Dalton's No. 1 Bounds, Sec. 34-7n-14e
Set 10-in. 560 ft.; S.D.; W.O.

MONROE COUNTY

P. J. McAlpine's No. 1 Frank Rye, Sec. 18-15s-17w.
Drlg. 2,770 ft.
P. J. McAlpine's No. 1 Crook, 1,090 ft. S 90 ft. W, NE cor. Sec. 15-13s-18w.
Set 8-in. 730 ft.

SIMPSON COUNTY

Berry Corp.'s No. 2 R. T. Berry, Sec. 13-2n-4e.
Tested S.W. 2,050 ft.

WALTHALL COUNTY

Mutual O. & G. Co.'s No. 1 Boyd, SW cor. SW SE Sec. 24-3n-9e.
Partly rigged up and S.D.

WASHINGTON COUNTY

Perkins & Deas' No. 1 Lee, 1,500 ft. E, 500 ft. N, SW cor. Sec. 33-15n-8w.
Set 10-in. 300 ft. and S.D.

WINSTON COUNTY

Jack Vale et al's No. 1 Moody, 713 ft. S, 667 ft. E, SW cor. NW SW Sec. 3-12n-14e
S.D. 20 ft.

La.-Ark. Proven Fields

NORTH LOUISIANA

CADDO—BLANCHARD

C. W. Brown's No. 2 P. A. Sharp, SE cor. NE NE Sec. 10-18-6.
Set 10-in. 20 ft.
Louana O. & G. Co.'s No. 3 Cushman, SE cor. SW SW Sec. 32-19-16.
Drlg. 928 ft.
M. Segall's No. 3 Sharp, 330 ft. S, 1,550 ft. E, NW cor. Sec. 11-18-16.
Comp. for 3,500,000 ft. gas at 958 ft.

CADDO—HOUSTON

Shoreline Oil Corp.'s No. 44 Crystal, 330 ft. S and E of C Sec. 13-21-16.
Derrick.

SABINE PARISH—ZWOLLE

Alexander & Cane's No. 1 Forman, SE cor N¼ SW NE Sec. 18-7-11.
S.D.; W.O. 2,372 ft.
Ivan A. Allen's No. 1 La. Long Leaf, 330 ft. N and W, SE cor. NW SE Sec. 13-7-11.
S.D. for wtr. 2,120 ft.
Crichton & Co.'s No. 1 Williams, 660 ft. N and E, SW cor. SW SE Sec. 4-7-11.
Set 6-in. 2,345 ft.
Dyer et al's No. 1 McCollister, 330 ft. S and E, NW cor. SW NE Sec. 24-7-13.
S.D. 1,100 ft.
Foster & Hartman's No. 1 Bowman Hicks, 330 ft. S and E, NW cor. NE Sec. 19-7-12.
Dry and abd. 2,696 ft.
E. D. Holcomb's No. 1 Porter, 330 ft. S, 330 ft. W, NE cor. SE Sec. 7-7-11.
Pulling liner 2,580 ft.
H. C. Maulding's No. 1 Davis, 350 ft. N and W, SE cor. NE NE Sec. 2-7-11.
Rigging up.
H. C. Maulding's No. 2 DeLatin, 330 ft. S and E, NW cor. NE SE Sec. 3-7-11.
S.D. 2,250 ft.
K. C. Peterson et al's No. 1 Bowman-Hicks, 330 ft. S and E, NW cor. SW NW Sec. 2-7-9.
Derrick down.
W. L. Posey's No. 1 Burkett, 330 ft. N and E, SW cor. NW SW Sec. 10-9-13.
Set 10-in. 45 ft.; set 6-in. 1,460 ft.
J. H. Reeves' No. 1 Bowman-Hicks, 1,650 ft. E, 335 ft. S, NW cor. Sec. 9-7-13.
Dry at 2,875 ft.
Spier & Butler's No. 1 Williams, Sec. 34-7-11.
Set 6-in. 2,642 ft.
Tex.-La.-Ark. Oil Co.'s No. 1 Pickering Lbr. Co., Sec. 3-3-13.
Recmtd. 10-in. 134 ft.; T.D. 2,210 ft.
Reaming 2,640 ft.

EAST TEXAS (BORDER COUNTIES)

CASS COUNTY

R. K. Kamon et al's No. 1 Savage, Mary Patterson Sur.
S.W. and abd. 4,016 ft.

HARRISON COUNTY

W. T. Boyd's No. 1 Rudd, John McWilliams Sur.
Drlg. 2,370 ft.
R. C. Payne et al's No. 1 Lowery, E. D. Spain Sur.
P.B. to 3,524 ft.

PANOLA COUNTY

R. H. Davis' No. 1 Wooten Est., Winnie Mann Sur.
Set 6⅝-in. 2,072 ft.
Givens & Holloway's No. 1 Wooten est., Winnie Mann Sur.
S.D. 2,155 ft.
R. W. Price's No. 1 Crawford, J. A. Williams Sur.
Arranging to resume.
Fred Stovall Drlg. Co.'s No. 1 H. B. Ivey, P. Martin H.R.S.
S.D. for csg. 1,980 ft.

SHELBY COUNTY

Cliff Stovall's No. 1 Pickering Lbr. Co., C H. Patterson Sur.
S.D. 1,136 ft.
Turner & Neil's No. 1 Pickering Lbr. Co., P. W. Harvey Sur.
S.D. 250 ft.

ALABAMA

CONECUH COUNTY

Ray L. Eastabrook's No. 1 Miller Mill Co., W½ NE Sec. 1-4n-12e.
Derrick.

HOUSTON COUNTY

Rice O. & G. Co.'s No. 1 Oakley est., SE cor. NW SW Sec. 9-3n-29e.
S.D. 2,440 ft.

LAMAR COUNTY

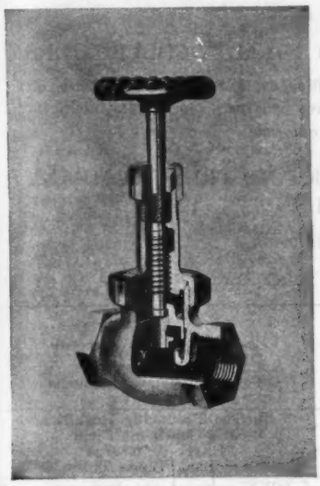
DeSoto O. & G. Corp.'s No. 1 Gardner, Sec. 32-15s-16w.
S.D. 4,183 ft.

NEW AND IMPROVED EQUIPMENT

Fairbanks Puts New Line of Valves on the Market

The new line of renewable bronze, angle and globe valves illustrated is being placed on the market by the Fairbanks Co., 393 Lafayette Street, New York. Some of the features the manufacturer enumerates are:

The radial seat, between body and bonnet, insures a tight joint and perfect



alignment of all parts. This seat is drawn to a tight joint by the union nut without sliding or scraping the surface of seat, which increases the life of valve and assures a tight body joint after every assembly.

The disc ring not only serves in the control of the steam but also on hot and cold water. It is composed of long-fiber asbestos, compounded with vulcanizing elements and given a special cure.

The disc holder is of standard dimensions, permitting the use of other standard makes of disc rings if desired.

The stem is of rolled rod bronze, averaging 65,000 pounds tensile strength. At least five clean-cut Acme threads are at all times in contact with the bonnet.

The union nut is of heavy bronze with large hexes for a firm wrench grip and permits removal of bonnet with less risk of damage.

The protected top seat above the threads on the stem gives greater assurance of a clean, tight joint when the valve is fully opened for the purpose of repacking the valve under pressure.

The ventilated, malleable iron handwheel assures a firm, cool grip. The bronze nut holding the wheel is well below the wheel rim surface thus protecting the hand. This nut is securely held with a lock washer.

All parts of globe and angle valves are interchangeable.

DELTA ANNOUNCES POWERFLARE

The Delta Electric Co., Marion, Ind., has brought out the new Delta flashing Powerflare, a positive safety beacon for trucks, buses, emergency crews, etc. The unit is small (less than 7 inches high by 4½ inches diameter), easily portable and it operates economically on a standard six-volt lantern battery, good for 40 hours or more.

Harry F. LePan, for many years assistant sales manager of Wilson & Bennett Manufacturing Co., Chicago, has been advanced to sales manager of the western division with headquarters in the main office and factory in Chicago.

Notes About Trade Literature

Two bulletins offered by the Worthington Pump & Machinery Corp., Harrison, N. J., are "Worthington Centrifugal Pumps, Two-Stage Volute, Type U," and "Worthington Centrifugal Pumps, Single-Stage Volute, Type F."

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The Anchor puller-hoist, suitable for many oil field uses, is explained in a circular obtainable from the Edelblute Manufacturing Co., Reynoldsville, Pa.

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The Timken Steel & Tube Co., Canton, Ohio, has issued a series of "Master Weight Tables" for round steel tubing, printed on heavy paper, punched for standard three-ring binders. Weights per lineal foot are given for all sizes of hot finished and cold drawn tubing having an outside diameter of one-sixteenth inch up to 10¾ inches and a wall thickness varying from 36 B.W.G. up to 1⅝ inches.

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Among interesting articles in the current number of the Yellow Strand, published by the Broderick & Bascom Rope Co., St. Louis, Mo., is one on how the Gulf Production Co. set its record string of casing in the No. 103 McElroy, Upton County, Texas.

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"What About Your Roofs?" is the title of a new brochure just published by Johns-Manville, 22 East Fortieth Street, New York.

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The Fisher Governor Co., Marshalltown, Iowa, is distributing Bulletin No. 80B, devoted to the Fisher cycle regulator for intermittent control of flow.

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The Class 3-AT single-stage, straight-line Timken roller-bearing compressor is described and illustrated in an eight-page bulletin, No. 157, issued by the Pennsylvania Pump & Compressor Co., Easton, Pa.

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Catalog No. 4, issued by Jon R. Long, operator and sales agent for the Oil Field Engineering Corp. and the Petroleum Equipment Co., Fort Worth, Tex., covers balls and seats, traveling valves, Petro Junior oversize standing valve, working barrels, Ofeco Hi-Line back side crank pumping unit, Petro oil pump, drops and seats and other oil field appliances.

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The Coffing Hoist Co., Danville, Ill., has prepared a 24-page booklet describing Coffing products, which include ratchet lever hoists, spur-geared gravity hoists, electric hoists and load binders.

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An 8-page bulletin in colors dealing with some of the uses to which the Byron Jackson Hydropress pumps have been put is being distributed by the Byron Jackson Co., Berkeley, Calif.

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Tube-Turns, Inc., Herald-Post Building, Louisville, Ky., is sending on request a quick reference chart that has been developed which provides an easy and extremely simple method of designing expansion loops, using Tube-Turns and straight lengths of pipe or tubing.

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A bulletin describing the newest development in seamless steel condenser or heat exchanger tubes has been released by the Allegheny Steel Co., Brackenridge, Pa.

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Leaflet 2182, descriptive of the new seal-clad induction motor, with protected windings, has been issued by Allis-Chalmers Manufacturing Co., Milwaukee, Wis.

—

Advantages gained by screening, together with complete specifications and information on the McNeely vibrating screen, are presented in an eight-page illustrated bulletin obtainable from the Vernon Tool Co., Ltd., 2740 East Thirty-seventh Street, Los Angeles, Calif.

—

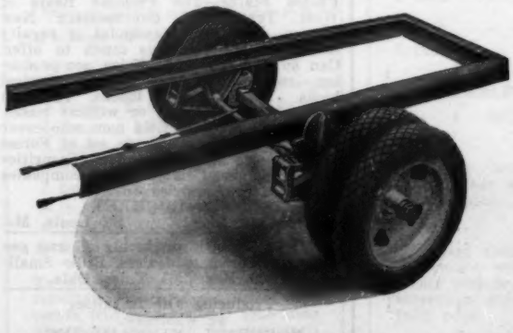
Kerotest Manufacturing Co., Pittsburgh, Pa., manufacturer of oil field valves and fittings, has issued a 12-page bulletin describing its line of forged steel products.

—

Mine Safety Appliances Co., Pittsburgh, Pa., has issued a new bulletin describing its all-service gas mask which affords protection against carbon monoxide and all other poisonous gases where there is sufficient oxygen present to sustain life.

Utility Trailer Attachment Increases Pay Load Capacity

Of especial interest to petroleum marketers and oil equipment companies, that have heavy hauling to do by motor truck, is the Model 15 six-wheel attachment made by the Utility Trailer Manufacturing Co., Los Angeles, Calif. This extension unit, adapted to four-wheel trucks of the Ford or Chevrolet class, may be riveted or bolted to the truck frame. When the brake levers and spring shackles have been connected and the spare-tire carrier assembly moved to the rear, the outfit can be driven as a proven six-wheel truck.



According to the manufacturer Utility six-wheel attachments can be used greatly to increase the pay load capacity of any truck at a comparatively small additional investment. The Utility Trailer Manufacturing Co. has been making truck conversions for over 10 years. Besides its factory and new sales rooms in Los Angeles, it maintains a warehouse supply in New York. Distributors are located in principal cities of the United States.

Men Well Known in the Equipment Field

Harry C. Potts, for over 15 years in the sales and service department of the Kerotest Manufacturing Co., Pittsburgh,

HARRY C. POTTS

Pa., has been made vice president of the company.

Harry Potts' name is familiar in almost every important oil producing center throughout the world, where he has furthered the sale of Kerotest cast steel valves and fittings.

FWD Offering New Truck Built for Speed and Work

The Four Wheel Drive Auto Co., of Clintonville, Wis., has developed a new 1½-ton speed truck, designated as Model HS in which the engineers have directed special attention to speed, sturdiness, ease of steering, smoothness of riding, reliability, and safety on the road. The specifications call for a road speed of 47 miles per hour, with full load.

The new model is propelled by an 84-horsepower engine which develops 185 foot-pounds torque. The fundamental principle of applying power equally to all four wheels is retained in the new model. Ease of steering and simple handling are increased by setting the front axle back 42½ inches from the front bumper. The HS Model employs this set-back-of-front axle principle also to gain equal distribution of load.

This new entry in the truck field is built for heavy duty as well as fast traveling. The 6.50-20 tires are dual in the rear.

TRACK-TYPE LIMIT SWITCH

A small, track-type, spring-return limit switch, intended for use in making or breaking control or indicating circuits at a fixed point in the travel of a part of a machine or mechanism, has been introduced by the General Electric Co. The switch, designated as CR9440-A1A, has one normally open and one normally closed circuit. Its maximum carrying and breaking capacity is 5 amperes at 550 volts a.c. and on d.c. ranges upward from 0.4 amperes at 550 volts to 2 amperes at 115 volts.

Summary of California Oilfield Operations for October, 1934

According to figures collected by the American Petroluem Institute, the total production of crude oil in California for October amounted to 14,453,794 bbls., an average of 466,251 bbls. per day. This is a decrease of 2,176 bbls. per day under September production.

CRUDE PETROLEUM PRODUCTION

(Figures of Production and Stocks are in barrels of 42 gallons.)

Group No. 1—	Total production October	Daily average Oct. 1934	Daily average Sept., 1934	Daily average Oct., 1933
Belridge-North	150,612	4,859	4,993	(*)
Belridge-South	62,416	2,013	1,905	(*)
Coalinga	581,480	18,757	19,181	14,799
Edison	32,720	1,056	644	...
Elk Hills	246,714	7,959	8,288	11,657
Fruitvale	106,767	3,442	3,455	4,388
Kern River	331,081	10,680	10,677	8,069
Kettleman Middle Dome	17,574	567	403	573
Kettleman North Dome	1,820,695	58,732	60,340	59,778
Lost Hills	140,866	4,544	4,629	*2,732
McKittrick	91,339	2,946	2,929	1,798
Midway-Sunset	1,670,997	53,903	54,077	48,683
Mountain View	303,951	9,805	9,921	572
Mount Poso	313,074	10,099	9,782	8,101
Round Mountain	137,319	4,426	4,643	3,036
Wheeler Ridge	12,985	419	405	445
Group No. 2—				
Capitan	25,281	816	546	10
Elwood	294,941	9,514	9,553	13,950
Rincon	42,232	1,362	1,263	1,514
San Miguelito	18,978	612	507	1,020
Santa Barbara	79,142	2,553	1,937	666
Santa Maria	147,934	4,772	4,710	4,561
Summerland	1,764	57	50	73
Ventura Avenue	711,238	22,943	23,443	34,856
Ventura-Newhall	124,254	4,008	3,649	3,249
Watsonville	1,860	60	60	60
Group No. 3—				
Brea-Olinda	315,478	10,177	10,311	9,436
Coyote-East	77,837	2,511	2,631 }	
Coyote-West	262,423	8,465	8,560 }	†10,273
Domingues	529,756	17,089	17,331	19,153
Huntington Beach	1,217,537	39,275	39,581	41,547
Inglewood	284,680	9,183	9,325	10,696
Lawndale	4,250	137	145	175
Long Beach	1,860,188	60,006	60,146	58,707
Los Angeles-Salt Lake	24,033	775	809	839
Montebello	178,892	5,771	5,555	6,123
Playa Del Rey	223,171	7,360	7,355	10,143
Potrero	12,779	413	314	297
Richfield	249,683	8,054	8,095	6,982
Rosecrans	91,222	2,943	2,965	2,882
Santa Fe Springs	1,130,777	36,477	37,514	15,914
Seal Beach	263,268	8,493	8,219	10,671
Torrance	222,548	7,179	7,258	6,540
Whittier	32,209	1,039	913	1,105
Total	14,453,794	466,251	468,427	473,065
September	14,052,800	468,427		
Decrease	400,994	2,176		

*Lost Hills figure includes North and South Belridge. †East and West Coyote were previously combined as Coyote. ‡Increase.

STOCKS HELD IN PACIFIC COAST TERRITORY BY CALIFORNIA OIL COMPANIES

	Oct. 31, 1934	Sept. 30, 1934	Oct. stock changes	Dec. 31, 1933
1. Non-gasoline-bearing crude, residuum, gas and Diesel oils	72,604,524	75,173,752	—2,569,228	92,664,274
2. Gasoline-bearing crude	37,238,481	36,838,951	+ 399,530	35,879,163
3. Unblended natural gasoline	2,551,169	2,771,595	— 220,426	2,304,194
4. Gasoline (not including distributing and service stations)	11,066,348	11,992,911	— 926,563	12,687,385
5. Naphtha distillates	*939,230	*1,046,348	— 57,118	*1,347,891
6. All other stocks	†7,816,768	†7,646,644	+ 170,124	†6,876,360
7. Total	132,266,520	135,470,201	—3,203,681	151,759,267
* Estimated amount of unfinished gasoline contained in item No. 5	777,199	841,022		1,024,397
† Coke included in item No. 6	591,595	597,811		620,313

OIL FIELD DEVELOPMENT

Group No. 1—	New rigs up	Active drill'ng	Producers compl't'd	Daily initial output	Active producing	Aband. wells Dril'rs	Aband. wells Prod'rs
Belridge-North	..	6	..	.....	21	..	..
Belridge-South	..	..	..	.....	138	..	..
Coalinga	1	1	..	.....	953	..	2
Edison	4	5	1	1,149	8	1	1
Elk Hills	..	..	..	.....	174	..	.
Fruitvale	3	3	1	1,405	65	1	..
Kern River	..	..	1	75	1,365	..	..
Kettleman Middle Dome	..	..	..	.....	2	..	..
Kettleman North Dome	5	27	3	11,702	77	..	..
Lost Hills	..	..	..	.....	326	..	..
McKittrick	..	1	..	.....	181	1	1
Midway-Sunset	4	7	3	138	2,480	..	4
Mountain View	6	22	4	7,098	36	..	..
Mount Poso	6	7	6	4,266	145	..	..
Round Mountain	..	..	..	.....	44	..	..
Wheeler Ridge	..	..	..	.....	34	..	..
Group No. 2—							
Capitan	1	1	1	934	11	..	..
Elwood	1	4	..	.....	49	..	..
Rincon	..	..	1	24	29	..	..
San Miguelito	..	1	..	.....	3	..	..
Santa Barbara	10	16	6	3,926	30	..	..
Santa Maria	..	1	..	.....	178	3	1
Summerland	..	..	..	.....	17	..	..
Ventura Avenue	2	16	..	.....	155	..	..
Ventura-Newhall	..	12	2	32	462	3	5
Watsonville	..	..	..	.....	7	..	..
Group No. 3—							
Brea-Olinda	1	1	1	1,090	356	..	..
Coyote-East	..	1	..	.....	75	..	..
Coyote-West	..	2	1	1,260	37	..	..
Domingues	..	3	3	1,772	65	1	..
Huntington Beach	1	7	1	2,125	465	3	1
Inglewood	..	1	1	385	203	..	..
Lawndale	..	..	..	.....	6	..	..
Long Beach	15	10	10	2,641	1,084	1	..
Los Angeles-Salt Lake	..	..	..	.....	144	..	..
Montebello	..	2	2	402	166	..	..
Newport	..	1	..	.....	.....	..	..
Playa Del Rey	1	2	1	493	163	1	1
Potrero	..	..	..	.....	12	..	..
Richfield	..	..	..	.....	244	3	..
Rosecrans	..	1	..	....	66	..	1
Santa Fe Springs	1	3	5	719	505	..	3
Seal Beach	..	..	..	.....	112	..	..
Torrance	..	1	..	.....	485	1	..
Whittier	..	..	..	.....	159	..	..
Miscellaneous Drilling	3	28	..	.....	.....	10	..
Group No. 4—							
Buttonwillow Gas Field	..	..	..	.....	.....	..	..
Dudley Ridge Gas Field	..	1	..	.....	.....	..	..
Goleta Gas Field	..	2	..	.....	.....	..	..
October	65	210	54	41,526	11,327	27	29
September	56	215	45	57,709	11,263	26	29
Increase	9	*5	9	*16,183	64	2	0
Average for year 1933	30	124	21	22,842	9,199	14	18
Average for year 1932	18	108	15	13,069	8,928	16	14
Average for year 1931	22	207	21	30,270	8,911	30	15

*Decrease.

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Write for Details on $165,375.00 Registered royalty issue, which is now ready for sale to the public.
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Sell in the most active area in the United States—The Permian Basin of West Texas and Southeastern New Mexico. From the standpoint of royalty investors this area has much to offer. Can supply you with choice non-producing royalties located on geophysical highs. Also drilling blocks, close in acreage to production, or wildcat leases. I maintain my own field men who cover this area for me. Complete set of Forms and Reports for filing with Securities and Exchange Commission accompanies every order. Inquiries Invited.
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HIGH GRADE producing oil and gas royalties offered to dealers. Billie Smallwood. P. O. Box 2261, Tulsa, Okla.

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at wholesale.
ROBERT L. KINKAID, INC.
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J. A. WOLF AND COMPANY
105 West Adams Street
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Dealers in Oil Royalties since 1918.

ANDREW J. BARRETT
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Tulsa, Oklahoma

Income Producing Royalties
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I OWN some of the best royalties in the Van and East Texas Fields. Will sell in any amount on five days draft anywhere. Challenge any customer of mine to sell me back royalty bought from me at any time for price paid to me. Reports made to the Federal Government on each piece. Will buy royalties and oil payments in Texas and Oklahoma. P. R. Knickerbocker, 3237 Westminister St., Dallas, Texas.

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EAST TEXAS AND VAN POOL
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We Buy and Sell.
E. T. MARION REAL ESTATE CO
407 Southwestern Life Ins. Bldg.
Dallas, Texas.

DRILLING BLOCK, Permian Basin. Will give 6 Sections, Northeast corner Loving Co., Texas, for well and 25c acre. Oil fields now Northwest, Northeast, East, Southeast and Southwest in Eddy and Lea Counties, New Mex., Winkler and Loving Counties, Texas. All within few miles my acreage. Write, wire BEN C. SPENCER, Box 175, Crane, Texas.

Producing Oil Royalty, listed under Federal Security Act, paying monthly income in half acres and upwards at reasonable prices. P. O. Box 35, Tulsa, Oklahoma.

FOR SALE—Gas and oil property; 1,400 A. leases; 4 deep wells. High rock pressure. High quality B.T.U. Gas franchises furnish two towns. Contract to furnish two other towns. Will pay Broker 5% commission for finding purchaser. Kathryn Sproul, Sedan, Kansas

PRODUCTION WANTED
Will buy producing well, Texas, now making 20 barrels, that has one or more locations to drill. Give full details first letter. Address Box G-460, The Oil and Gas Journal, Tulsa, Okla.

PRODUCTION WANTED
Will buy production or proven acreage that will justify a dependable small refinery operation in Texas Panhandle. No brokers. Principals only. Address Box G-474, The Oil and Gas Journal, Tulsa, Oklahoma.

CLASSIFIED ADVERTISING

For Sale—Equipment

2½-INCH LINE PIPE — Several miles, good quality 2½-inch Line Pipe ready for delivery in any quantity from Pampa and Houston Stocks.

NEW 4¾-INCH SEAMLESS CASING — 4,000-ft., 4¾-inch, 16-lb., New Seamless Casing, located at Shawnee, Okla. Brand new—on location only a few weeks. Unusual circumstances make this attractive buy. Call Wichita Office for details.

UNION TOOL ROTARY WITH DRILL PIPE — Complete 6-inch "Union Tool" rotary with 125-H.P. and 115-H.P., 250-lb. W. P. Boilers; 12x12 Ideal Twin Cylinder Oil Bath Drilling Engine; 12x6¾x16 inch "Johnson Gumbo Buster" Mud Pumps; 3,500 feet 6⅝-inch Drill Pipe; and all other necessary equipment for Panhandle or similar drilling. Send for itemized list of equipment, price and terms. A good outfit at a very attractive price.

DRILL PIPE CASING—Made from good quality 6⅝-inch O.D. Drill Pipe. New collars and new accurate threads. Ample quantities now ready for delivery from Wichita, Kilgore and Russell yards.

DIESEL CABLE TOOL DRILLING OUTFIT — 90-H.P., 6-cylinder Fairbanks-Morse Diesel Engine; Air Starting Unit; Lighting Unit; Fuel Tank and all necessary equipment. Has been thoroughly overhauled by us; tested on the block; runs and looks like new. Positively guaranteed in every way. Will pay for itself in fuel costs on a few wells. This engine may safely be purchased without inspection as it is in the same condition as a new engine or it may be inspected and tested by prospective purchaser in our Wichita shops. May be mounted on trucks and used as portable power on lease or is capable of handling deep cable tool work. Phone, wire or write Wichita, Kansas, Office for price, and complete details.

5½-INCH LINE PIPE—15,000 ft., 13-lb., 11½-thd., good quality Line Pipe ready for delivery from original salvage location near Muskogee, Okla. Considerable saving may be made by purchasing this material where it now stands before stocking expenses have accrued. Contact Wichita Office.

PUMPING ENGINES—We can furnish most any size or type of gas pumping engines for use with single wells or for operating pumping powers. Included in our stocks are several 40-H.P. "Webers"; a 35-H.P. "Marion"; several 35-H.P. "Superiors"; and a 25-H.P. "Superior." These engines are all equipped with late type reverse clutches and all necessary equipment and each one has been completely rebuilt in our shops. Now on hand at Wichita, Kansas, and Houston, Texas, warehouses. Regardless of what an engine can be purchased for in the field, these engines will save the buyer money from the first day they are put to work. Every one is guaranteed to be in A-1 condition and ready to go on the job without further repairs.

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REFINERY EQUIPMENT, PIPE AND TANKS

The latest and most modern refinery ever dismantled. Complete cracking, lub, and skimming plants. All sizes pipe, valves, and fittings. Two 325 plate, 48" Carbondale wax presses and other wax plant equipment.

20" PIPE SPECIAL, IN SERVICE 2 YEARS

40,000 feet Naylor Spiralweld Toncan steel pipe in 40 foot joints, with or without victraulic couplings, located in Oklahoma City.

FORTY 55,000 BBL. STEEL ROOF TANKS

Will sell where are or will cut down and re-erect on your grade at great saving. Complete line of tanks, any capacity.

SONKEN-GALAMBA CORPORATION
64-108 North Second Street, Kansas City, Kansas.

REFINERY EQUIPMENT AND STORAGE TANKS

150 HP boilers, horizontal return tubular and water tube. Shell stills—Batch agitators—Tanks: 55,000, 35,000, 3,000, 600, 100 barrel capacity—Steam pumps—Air Compressor—Condenser and cooling boxes. Dubbs Dephlegmators, Expansion Chambers, Furnace Castings, Structural work. Second hand fire and red brick.

THE PURE OIL COMPANY
MUSKOGEE, OKLAHOMA.

25 K.W. and 40 K.W. Gas Engines, 220 volts, D.C. Two 100 K.W. Gas Engine Generator Sets, 220 volts, D.C. 7x6 Ingersoll-Rand ER-1 Air Compressor. Six-inch Outer Pipe Threading Machine. Also, large stock of lathes, pipe machines, milling machines, etc. Send for our list.

Terms to suit.
CINCINNATI MACHINERY & SUPPLY CO.
26 West 2nd St. Cincinnati, Ohio.

5—80 HP BESSEMER GAS ENGINES, type 8, direct connected to 14"x20" compressors. Price $600.00 each. Bloomington, Kansas.

2—85 HP WATT-MILLER direct connected vacuum pumps, shop numbers 1825 and 1826, power cylinders 13"x20", vacuum cylinders 18"x20". Price $400.00 each, Elgin, Kansas. 25 HP and 35 HP Bessemer Gas engines at price of $250.00 each, at Elgin, Kansas.
SONKEN-GALAMBA CORPORATION
64 No. 2nd St. Kansas City, Kansas.

IMPROVED N-Sullivan Core Drilling Machine completely equipped for rotary drilling for shallow production. Address Box G-470, The Oil and Gas Journal, Tulsa, Okla.

KEYSTONE Driller, size 5½, equipped with new McCormick-Deering Gas Engine also tools. Price right. Stumpff & McFaull, Box 1123, Texarkana, Tex.

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Equipment Wanted

POSITIVE gas meters wanted, good for at least one hundred pounds pressure. Muskegon Pipe Line Company, Muskegon, Michigan.

WANTED
Two or three 4,500 or 6,000 gallon, three-compartment tank cars with coils. Address Box G-471, The Oil and Gas Journal, Tulsa, Okla.

WANTED—Complete oil refinery for dismantling. We are prepared to pay cash for a plant equipped with up-to-date and modern machinery. CENTRAL EQUIPMENT CO., 2400 West Madison Street, Chicago, Illinois.

WANTED—Skid type winch, suitable for tubing, rod, and sand pump work on wells 500-1,000' deep; prefer outfit with folding A mast; cash. Oko Oil and Gas Co., Iola, Kansas.

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THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

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THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

Leases—Production

NEW MEXICO Oil and Gas Leases and royalties. Send 50 cents in stamps for new State Oil Map of New Mexico. Roy G. Barton, Clovis, New Mexico.

BUY LAND—2½ acres, clear deed, for $75, $5 down, $5 month, in California's next prospective oil and gas field. Well down 660 ft. now. Kimbrough, 729 San Fernando Bldg., Los Angeles, Calif.

NEW MEXICO—My weekly scout report furnishes complete and reliable information on New Mexico developments. Send for copy. W. S. Patterson, Santa Fe, N. Mex.

ATTENTION OIL MEN
You may see a demonstration of our Geo-Physical instrument, that has located hundreds of oil and gas wells. Men who are interested in drilling, buying and selling royalties and leases, can protect their investments by using our survey and mapping service. We indicate depths, pay sands and if oil or gas. We have several drilling blocks, mapped and leased, on which we can make satisfactory deals with interested parties. Our services can be had for cash or working interests.
MID-WEST DEVELOPMENT CO.,
423 Cuyahoga Bldg.,
Cleveland, Ohio.

FOR QUICK cash sale, will sell lease in Seminole area averaging 50 barrels daily. Settled sand production at $7,500. 701 Petroleum Bldg., Oklahoma City, Okla.

FOR SALE—40 Acre lease San Juan Co., N. M. Blanco field, Sec. 36, Twp. 30n, R. 9w. Sacrifice for quick sale, $100 per acre. Presley Guio, 406 West Sixth St., Los Angeles, Calif.

Situations Wanted

Petroleum Geologist—Government and major company experience. Go anywhere. Available soon. Address Box G-473, The Oil and Gas Journal, Tulsa, Okla.

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JOHN MORRIS, Seventh Floor, 1237 Market Street, Philadelphia, will help float small deal. No stock selling. Send full facts in first letter.

JAMES E. MILLER CO., 207½ E Third St., Tulsa, Okla., will co-operate with responsible parties seeking aid in financing projects of higher order.

Co-operative financing solicited for developing block in SE Zapata County, Texas. If you mean business communicate with L. F. Bassett, Zapata, Texas.

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DELAWARE CHARTERS—Fees small; submitted forms. Chas. G. Guyer, 901 Market Street, Wilmington, Del.

Oil Industry Printing

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

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Before disclosing your invention to anyone, send for blank form:
"Evidence of Conception,"
Instructions "How to Establish Your Rights" and complete information FREE!
LANCASTER, ALLWINE & ROMMEL
418 Bowen Building,
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GREAT BARGAIN! Lead, copper, silver or gold! Ten different ledges. C. J. GREENE, Sells, Arizona.

PARTNER WANTED—An independent company manufacturing only high grade lubricating oils and greases, owning their own production, refinery and sales need $25,000 for development. For particulars address Box G-472, The Oil and Gas Journal, Tulsa, Okla.

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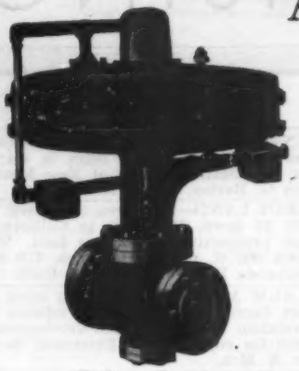

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